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# CALIFORNIA STATE JOURNAL OF MEDICINE



NOTHING illustrates more clearly the interdependence of the sciences than the reciprocal impulse given to new researches in pathology and entomology by the discovery of the part played by insects in the transmission of disease. The flea, the louse, the bedbug, the house fly, the mosquito, the tick, have all within a few years taken their places as important transmitters of disease. When the thoughtful historian gets far enough away from the nineteenth century to see it as a whole, no single feature will stand out with greater distinctness than the fulfillment of the prophecy of Descartes that we could be free from an infinity of maladies both of body and mind if we had sufficient knowledge of their causes and of all the remedies with which nature has provided us. SIR WILLIAM OSLER.

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## October Contents

	Page
Otitis Media in Infants and Children. By Clifford D. Sweet, M. D.	409
Local Anesthesia in Major Surgery: Its Uses and Limitations. By L. Eloesser, M. D.	412
The Therapeutic Aspect of Short-Wave X-Rays. By Albert Soiland, M. D.	415
Heart Failure: Its Underlying Causes, Clinical Manifestations and Treatment. By William J. Kerr, M. D.	417
The Essential Points in the Treatment of Diabetes With Insulin. By W. D. Sansum, M. D., and N. R. Blatherwick, M. D.	420
The Etiology of Gastric and Duodenal Ulcers. By George E. Ebright, M. D.	423
Some Conclusions Drawn From the Observation of Four Thousand Cases of Gonorrhoea Treated in a Public Clinic. By Alfred R. Rogers, M. D.	425
Notes on the X-Ray Treatment of Whooping Cough. By John J. Kingston, M. D., and Harold K. Faber, M. D.	429
Syphilis of the Bladder. By Anders Peterson	431
Fatal Air Embolism After Puncture Maxillary Antrum—Autopsy. By J. A. Bacher, M. D.	433
Editorials:	
Indemnity Defense Fund Coverage and Protection Stops November 30, 1923.	434
The Illness of the Editor of the Journal.	434
An Innovation in Medical Literature.	434
Another Hospital "Survey".	434
Periodic Medical Examinations.	435
Attention, Medical Officers!	436
1924 Meeting of California Medical Association	437
Correction	437
Hospital Conference Program.	437
County News:	
Fresno	439
Los Angeles	439
San Diego	439
San Francisco	440
Sonoma	441
Sir William MacEwen's Address to the California Academy of Medicine.	441
Medical Economics	442
Nevada State Medical Association.	443
Utah State Medical Association.	444
Book Reviews	444
Books Received	444
Pharmacology and Therapeutics.	445
Abstracts From Reports to American Medical Association House of Delegates at San Francisco Session	447
The Plight of the Family Doctor.	449
The Abuse of Charity Work.	451
Advertising—Direct and Indirect.	452
The Courts and Public Health.	453
Southern California Medical Society.	454
New Members	454
Deaths	454

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Editor  
Secretary  
Superintendent of Publications

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WILLIAM H. BARRY

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## ORIGINAL ARTICLES

### RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

eral level of diagnostic ability and accomplishment among all of us who stand in the public eye as its disciples. As the very foundation of all diagnostic procedures, a complete physical examination will always be essential. No refinement of laboratory methods and no limitation of practice to a specialty can remove the necessity of first securing this fundamental information, which comes to us only by the use of our own senses. Only after we possess and have recorded these findings can laboratory findings or the report of a specialist be properly evaluated. Furthermore, if the best interests of the patient are to be served and unnecessary loss of his time, money, and not the least—his confidence in scientific medicine—are to be avoided, the complete physical examination is the only basis upon which laboratory tests can be ordered or consultation requested. Lastly, it must form the basis of all surgical interference except it be of the most obvious and minor nature.

The above considerations apply with especial point to otitis media in infants and children. The infant or the child may have an otitis of any grade without localizing symptoms or with typical symptoms coming so late that serious damage has resulted before treatment is begun.

Since diagnosis can depend only in part on symptoms, the physician must school himself to see the tympanic membrane. As in the entire field of medicine, he who would recognize the abnormal must first have a clear mind picture of the normal. With reasonable diligence, a proper light, and instruction which can be had during a few hours in any ear clinic, this picture can be firmly and clearly fixed in the mind. Within a short time, departure from this normal will be recognized with sufficient clearness. If in doubt, an aurist can be called and, after a few such consultations during which the tympanum is inspected under expert guidance, the ability to recognize these departures from the normal is greatly increased.

Otitis media, because of its high rate of incidence and because of its serious import to the patient, should be looked for routinely. Some inflammation, catarrhal or purulent, of the tympanic cavity occurs in the course of many acute upper respiratory infections—probably in 25 to 40 per cent of all that run a febrile course of twenty-four hours or longer in infants. The incidence of this condition as a complication, during the contagious diseases of childhood and in such systemic infections as pneumonia, is too well known to need

### OTITIS MEDIA IN INFANTS AND CHILDREN\*

By CLIFFORD D. SWEET, M. D., Oakland, Cal.

The purposes of this paper are:

1. To emphasize the necessity of the inspection of the membrana tympani as an important part of the physical examination in all infants and children.
2. To point out that, if the relief afforded by early diagnosis is to be given the patient, this examination must be made by the family physician, for the reason that only those cases with sufficiently marked and definite symptoms to enable the parent to make the diagnosis fall directly into the hands of the aurist.
3. To call attention to the fact that the necessary skill required to make this inspection can be acquired with a moderate expense of time and diligence by any intelligent physician.
4. To illustrate by brief summaries of cases which have been under my care, the variety of symptoms which may be present in cases of otitis.
5. To re-emphasize the necessity of early paracentesis of the tympanum, in order to prevent serious and prolonged inflammatory processes with their attending dangers.

If scientific medicine is to progress as it should, our every effort must be made to raise the gen-

\*Presented to the Section on Pediatrics at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

more than passing notice here. The results in improperly managed cases and in those cases harboring a virulent organism are extremely unfortunate, resulting in loss of life with secondary meningitis, cerebral abscess, or septicaemia, and with loss of, or at least with placing in jeopardy, a greater or lesser percentage of the acoustic function because of mastoiditis with its attendant chronic otitis.

That otitis media cannot be diagnosed except by a careful inspection of the tympanic membrane is evident to anyone who follows a few cases in infants and children. Pain is by no means a constant symptom and, when present, may be referred to the frontal region, the opposite ear, or to the posterior cervical region. Small infants may keep up a more or less constant rolling of the head, probably because of the presence of pain or headache. The belief, however, that pain accompanies all inflammatory processes of the middle ear is widespread not only among laymen, but also among members of the medical profession. Very frequently after making a diagnosis of otitis media, I have had both the mother and the family physician say, with evident doubt in voice and expression, "But doctor, there has been no sign of pain." Likewise, tenderness about the ear or on movement of the auricle may be entirely absent. This, too, especially among physicians, is thought to be a constant sign, and its absence is taken as proof that no otitis exists. In young infants an otitis that produces inflammation of considerable degree may often be detected because manipulation of the auricle is painful. Often the mother's attention is attracted to the ear in this manner. This complaint on the part of young infants is produced because the absence of a bony external auditory meatus permits movement of the area of infiltration about the membrana tympani. This symptom disappears in older children because the cartilage of the meatus becomes separated by a well-defined bony meatus, and the tympanic membrane no longer shares in its movement.

Since these two classical symptoms may or may not be present, it is evident that careful inspection of the tympanum must be made in all cases. That otitis of severe grade may exist without other symptoms than fever is illustrated by the following:

G. F., an unusually intelligent girl of 11 years, was seen in consultation because of a fever of three days' duration for which no satisfactory explanation could be found. About one hour before she was seen the left tympanic membrane had ruptured, and at examination the meatus was filled with purulent material. This progressed to a mastoiditis that required surgical relief. At no time was there complaint of pain or mention of discomfort or tenderness about the ear prior to the rupture.

E. T., age 6 years, was seen in the fourth week of an illness characterized by continuous fever ranging from 101 to 104°. While the child was toxic, there was no complaint, and only late in the disease was there a spontaneous rupture of both tympanic membranes with the discharge of a small amount of purulent material. Even after rupture the amount of discharge was so small that it attracted but little attention and repeated Widal tests were made in an attempt to establish the diagnosis of typhoid fever. During this time she was seen in consultation by a colleague whose training, judgment, and ability are of a very high order, but as no tenderness on pressure, or pain on movement of the auricle could be elicited, otitis was dismissed as a probable cause of

the fever. When seen by the writer no cause for the fever was apparent, except the ear condition. In both auditory canals a small amount of pus was present. On inspection there was such complete prolapse of the superior and posterior walls of the auditory canals that no part of the tympanic membranes were visible. A diagnosis of bilateral mastoiditis was made, and the following morning Dr. F. M. Shook did a double operation revealing a very marked involvement of both mastoid areas with extensive bony necrosis. In this case there must have been considerable mastoid tenderness, but as the child was an unusually diffident one, it was difficult to elicit definite signs.

Even when pain and tenderness are present, they do not indicate accurately the degree of the pathological process. Many times the most painful otitis will subside within a few hours, requiring only expectant treatment. Whether or not the expectant method may be safely followed can be determined only by careful and repeated inspection of the tympanum. Then, too, pain when present, may be irregular in character—for example, it may come on only at night. The child may appear to be normal during several days, and suffer each succeeding night with severe ear-pain.

E. S., a girl of 5, suffered severely for five nights with severe pain in the right ear and, because she appeared normal in the day-time, a physician was not called. When seen on the fifth day, the temperature was 100° R, and physical examination was negative except that the right tympanum was a deep red in color, and sufficient bulging had taken place to obliterate all landmarks. Paracentesis released a large amount of serosanguineous fluid. That night the child slept comfortably, and for a few days seemed to be progressing well, when the temperature suddenly shot up, the discharge from the ear became more profuse and decidedly more purulent in character. The ear condition progressed rapidly into a mastoiditis that demanded operation. Very probably had a paracentesis been done early, the result would have been a very simple otitis which would have cleared within a few days.

Fever, while usually present, is not a constant symptom. Where present, with the other direct symptoms as pain, tenderness on pressure or manipulation of the auricle, pointing to or constant handling of the affected ear, complaint by voice or head rolling, the diagnosis is apparent. However, the writer has many times seen infants with a normal temperature whose only symptom was vomiting or restlessness at night, but whose tympanic membranes were one or both bulging markedly and greatly discolored. Upon paracentesis, a free discharge of pus was released from the middle ear, with relief of all symptoms. Often this purulent discharge is maintained for days or even weeks, establishing beyond any possible doubt the true nature of the complaint.

No attack of diarrhoea in an infant or child, whether febrile or afebrile, can be considered completely without giving otitis its proper place either as the causative factor or as a complicating factor which delays or prevents recovery.

A. T., age 16 months, when first seen had been suffering with diarrhoea for two weeks, apparently convalescent for a day or two and then relapsing. All of the usual remedies, castor oil, starvation, colon flushes, carbohydrates, and protein milk, had been tried without avail. Malaria had been considered and ruled out by negative blood findings. Finally, the mother had been told to take him out

of the hot climate of an interior valley. Change of climate had likewise been of little or no aid. On examination and paracentesis a purulent otitis media was demonstrated, the relief of which caused the diarrhoea to disappear at once.

Vomiting is likewise a fairly common presenting symptom of febrile or afebrile otitis, especially in young or marantic infants. Many text-books state that otitis is rare during the first few weeks of life, but we have repeatedly seen it in infants under one month of age. Even in these very young infants its incidence is great enough to make inspection of the ears an important part of the physical examination. In examining young infants, it is well to remember that the tympanic membrane lies almost vertically across the canal, and that it can be seen by slight downward and forward traction on the tragus rather than by backward traction, which is practiced on the older child. I have had one case of mastoiditis with subperiosteal abscess in an infant of five months, whose otitis media began on the tenth day after birth, with a purulent discharge which was continuous until operation.

J. C., a boy baby 13 days old, was first seen because of projectile vomiting which indicated pylorospasm and which was sufficiently marked to make us seriously consider pyloric stenosis. On examination both tympani were cherry red and markedly bulging. Paracentesis released a free purulent discharge from both tympanic cavities with subsidence and, after a few days complete clearing up of the symptoms of pylorospasm.

Intestinal indigestion or colic also has as its cause an afebrile catarrhal or purulent otitis. This condition should especially be given consideration if the symptoms are present only or in most marked form at night, and a history of an acute coryza within the preceding ten days makes one consider it as the most probable cause. Frequently we see infants who have been subjected to most unreasonable food changes and deprivations—even weaning from an adequate breast milk supply—when examination and treatment of an otitis was the only indicated treatment. In this connection it is well to remember, as G. F. Still points out, that a catarrhal otitis may exist in a sufficiently active form to produce systemic symptoms for a long period of time—even weeks or months.

J. R., age 7 months, was seen because of persistent "night colic," which had caused restlessness, crying, and much flatulence for a period of five or six nights. Several food changes including both increasing and decreasing the food had been without avail. About seven days before the beginning of symptoms, there had been an acute coryza. Examination revealed a reddened left tympanic membrane, but no bulging—the temperature being normal. Instillation of 10 per cent carbolic acid in glycerine every two hours during the waking hours, and the insertion of a cotton plug in the external auditory meatus at bedtime gave instant and complete relief.

#### SUMMARY AND CONCLUSIONS

1. Every effort should be made to improve the level of diagnostic ability of the members of our profession. This can be forwarded by the members making careful routine physical examinations.

2. Otitis media in infants and children is so frequently present without localizing symptoms that inspection of the tympanum is a necessary routine part of every physical examination. This in-

spection presents no technical difficulty that cannot be overcome by the general practitioner.

• Much more could be written on this interesting and important subject. It is hoped this may stimulate the general practitioner and the specialists who handle children to give it close and careful study.

(440 Seventeenth Street, Oakland, Cal.)

#### DISCUSSION

Langley Porter, 240 Stockton street, San Francisco—The importance of the subject which Sweet presents is hardly to be overestimated. Anyone who deals much with sick children soon comes to feel that neglect to examine the ears is a negligence for which the infant pays dearly. Sometimes the payment is made in unnecessary pain or unduly prolonged fever, which disappears after spontaneous rupture of the tympanum. At other times the toll is taken in terms of insidious diseases, mastoiditis, zygomatitis, subdural abscess, sinus thrombosis, meningitis, brain abscess, or general sepsis.

In the modern type of electric otoscope which carries its power in dry cells concealed in the handle, we have an instrument that is convenient and capable of perfectly illuminating the ear-drum, and presenting the observer with a magnified image of that structure. If the physician will make observation of the ear-drums part of his routine examination, he will soon be so familiar with these structures that slight variations from health will arrest his attention at once. Such procedure on the part of all those who deal with babies would soon remove otitis media from the group of pathological entities commonly overlooked in infant patients, a group which includes otitis and its complications—cystitis, scurvy, intussusception, and empyema.

Sweet has properly laid stress on the fact that in many instances otitis comes on and consummates without pain or tenderness that can be referred to the ear, indeed, sometimes with no pain at all, so that when we are confronted by a feverish infant or child, one of our first duties is to exclude a possible otitis even when the patient suffers no pain.

One point that the speaker has not stressed is that very extensive otitis may occur without reddening of the drum or of the auditory canal.

During the epidemics of influenza some years ago, the otologists of the Children's Hospital made routine otoscopic examination of the ears—morning and night—and on many occasions after finding the drum apparently normal at one examination were confronted with a rupture and a discharging otitis at the next. In all the cases which behaved in this way, pneumococci were grown from the discharge in pure culture. Such cases are less important than those of the smaller group in which otitis occurs without pain and without rupture going on to dangerous complications.

Every children's hospital can show records of such cases. For instance: An infant suffering from underweight, with diarrhoea, after the diarrhoea was cured continued to have a high leucocytosis and a septic temperature, which on several occasions reached 106° to 108°. This state of affairs lasted for some six weeks, and during this time the child's ears were repeatedly examined by various members of the medical staff, as well as by otologists, and not the slightest evidence of inflammation of the drums or of the canal, nor any edema, pain or tenderness could be found; yet, on autopsy, this child had extensive involvement of both middle ears, both mastoids, as well as a subdural abscess on one side.

The record rooms of almost any hospital can furnish duplicates of this case, and it would be possible to quote one and many others from personal experience that could as well, or better, illustrate the point that extensive damage and life-endangering complications can develop in the middle ear and mastoid without any or only the slightest degree of pain, tenderness, swelling, or reddening of the audi-

tory canal or of the tympanum. Such possibilities not only emphasize the need for observation of the points Sweet has brought out, but they make it incumbent on all of us to give weight to the ear as a source of, insidious disease and to such study of the not infrequent mystifying attacks of fever with leucocytosis which can develop from this organ. Following such a course, we will be able by exclusion to arrive at diagnosis of the ear-drums in the absence of positive aural findings.

**Clifford D. Sweet (closing)**—I want to thank Dr. Porter for calling our attention to the cases that develop an otitis media of severe grade without physical signs that can be discovered by otoscopic examination. I have seen such cases, but after consideration did not include them in this paper for fear of making the diagnosis appear to be more difficult than it is. At another time I hope to present an additional discussion of otitis media.

#### LOCAL ANESTHESIA IN MAJOR SURGERY: ITS USES AND LIMITATIONS\*

By L. ELOESSER, M. D., San Francisco

From the Division of Surgery, Medical Department Stanford University.

The request of your secretary, Dr. Rethwilm, to discuss local or regional anesthesia in major surgery has given me a welcome opportunity. The time is ripe, I think, to discuss not so much the various applications of local anesthesia as to attempt a delineation of its indications and limitations. Local anesthesia no longer needs a plea. It has come to stay. Twelve years ago a paper of mine, sketching some of the uses to which it might be put, was printed in the California State Journal of Medicine. Such a paper would be superfluous today. There is scarcely a hospital in which local anesthesia is not in daily practice. We need nowadays rather to scan the possibilities and impracticalities of this lusty and sometimes outrageous youth; to curtail his vagaries and bizarre excursions, and to properly confine his activities. As is usual with these striplings, charmed with the exhibitions of their first prowess, he has run too far.

One has but to read reports of strange methods of splanchnic injection, of paravertebral injection, of arterial injection, to realize that the technical fascination of this kind of narcosis has led adepts in the art to the elaboration of complicated tricks and show-pieces that lose all sight of the end they wish to attain; viz., the most innocent and easiest abolition of surgical pain. These tricks and show-pieces have not been without a certain usefulness. At certain rare times they may be of practical value; aside from this, they show what can be done.

The object of any narcosis, whether regional or general, is to prevent pain. The easiest and most innocent way—easiest and most innocent, not for the surgeon, but for the patient—should be the way of choice. This formula for indications and contraindications for methods of narcosis is so simple that it seems a platitude, and to dwell on it, as Henry James says, "the laborious demonstration of the self-evident." But it is not simple. There are too many factors that govern what is easy and innocent, and too many varying ones—factors vary-

ing with particular patients, particular surgeons, particular times and places of operating, with assistance and equipment and circumstances.

These factors, both the varying and the fixed ones, I shall try to discuss.

First, the fixed ones. There are certain disorders and diseases in which even the temporary loss of all safeguarding reflexes is harmful; natural reflexes—pain and muscle spasm to splint injured parts; cough. There are certain disorders where loss of consciousness is harmful in that it allows the patient to do things he should not do—to struggle and toss about, to strain, to cough, to make deep or uncontrolled respirations, to vomit. There are certain operations—on nerves and tendons—which may be made more difficult by the inability of a patient to co-operate.

When, therefore, loss of consciousness is in itself harmful, because it abolishes the reflexes, or deprives the patient of self-control or the ability to co-operate, regional anesthesia is the method of choice and is preferable to general narcosis. To illustrate: The loss of safeguarding reflexes is harmful in many disorders of the mouth or of the lung. It is true that modern devices for insufflation anesthesia have lessened the dangers of aspiration from the mouth, but none of these is as effective as a cough in clearing the lung of material that may enter it.

As harmful as the things that a patient does *not* do when his reflexes are gone are the things he does when he loses consciousness. No one, for instance, would prescribe for a tubercular patient deep-breathing exercises and violent muscular exertion. Yet that is what he often does when he goes under an anesthetic—breathes deeply, struggles, and tosses about. It is not nitrous oxide gas, in this instance, that damages the pulmonary parenchyma; it is the deep respiration and the muscular exertion that bring on a post-anesthetic exacerbation of tuberculosis.

A man suffering from a fractured skull, with intracranial hemorrhage, we treat in a way calculated to reduce the intracranial pressure. We keep him quiet, we give him epsom salts. But we put him to sleep with ether (1 c.). Unconscious, he is trundled about from a gurney to the operating-table; he struggles, he vomits—during, perhaps, or after his anesthetic—he does everything he should not do to keep the pressure in his intracranial vessels down. It is not the ether that hurts this man; it is the effect of uncontrolled and uncontrollable incidents of the loss of consciousness.

In operations, therefore, where loss of consciousness is in itself harmful, local anesthesia is the method of choice. Into this category will fall, mainly, certain operations on the brain and operations involving the respiratory tract. But not abdominal operations. A temporary loss of consciousness is not harmful to patients undergoing a laparotomy. We have not our viscera under voluntary control. They work the same whether we are asleep or awake. Consciousness is not a help; it is a hinderance, when the belly is opened.

These, then, are fixed factors in governing our choice of anesthetic. In such and such a disorder

\* Presented to the Section on Anesthesiology at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

the risks arising from a loss of consciousness are such and such, they may be gauged beforehand, and weighed against the possible degree of danger, pain, and discomfort of a regional anesthesia. The choice of anesthetic is determinable by balancing risks and discomfort one against the other.

Another fixed factor lies in the magnitude of the operation. There are few patients who would care to take a general anesthetic for the removal of a wen or a wart. If the operation is slight, and the local anesthetic easy, local anesthesia will outweigh the discomfort of a general anesthetic. But if the field to be anesthetized is large, so that it calls for large amounts of solution, the danger of novocain poisoning (reported more and more frequently of late) may outweigh that of a general anesthetic.

Varying factors determining the choice of anesthesia will depend upon the patient, the surgeon, outer circumstances, and matters of expediency.

Unless quite necessary, local anesthesia should not be forced upon a frightened or an unwilling patient. The first needle-prick will usually tell of the success of regional anesthesia. A patient who cries out and complains when the needle pierces his skin will have a poor anesthetic. The psychic shock to a frightened patient of an operation under local anesthesia cannot be ignored; it may more than outweigh the damage done by a general anesthetic. Operations upon such patients are likely to be so prolonged and hampered that they turn out unsatisfactorily in the end—both patient and surgeon are likely to wish that the operation had been done under a quiet general narcosis.

Preliminary injections of morphin-atropin  $\frac{1}{4}$ -1/150 grains for adults are almost indispensable. They occasionally so quiet the psyche that even frightened patients will submit calmly to operation. Supplementary doses of morphin 1/8-1/6 grains may be added to alleviate the momentary pain of maneuvers such as stripping the pleura, which cannot be controlled by novocainization.

I no longer use scopolamin. Its effects are uncontrollable; its balance wavers between depression and excitation, not only in different individuals, but sometimes in the same person. The apathy and somnolence of a scopolamin narcosis are alarming at times. On the other hand, often a somnolent patient will be awakened by a sudden twinge of pain, by a noise or a fright, and then suddenly pass into a stage of excitation in which he is quite uncontrollable, and which makes the induction of general anesthesia very difficult. It seems as though patients once aroused from a scopolamin lethargy quite regularly fly into this fit of excitation. Once, however, general narcosis has been induced, the depressing effect of the scopolamin again makes it self felt and the patient is likely to show an alarming slowness of respiration and cyanosis.

Varying factors governing the choice of anesthesia will lie in matters of expediency, circumstance, and equipment. Great stress of work, in military hospitals for instance, may leave no time for local anesthesia.

On the other hand, local anesthesia is invaluable when assistance is scanty or poorly trained. With local anesthesia we save not only one more or less

highly trained member of the personnel—the anesthetist—but also the orderlies and nursing staff necessary to watch over an unconscious patient. Local anesthesia is of the greatest value in small hospitals and in institutions where the surgeon is forced to work almost, if not quite single-handed. Often he will stretch a point to work under regional anesthesia which he himself can induce and control, rather than leave his patient to the mercies of gas or ether at the hands of an unknown anesthetist of dubious skill.

Often gas may be the anesthetic of choice, but lacking equipment or a skilled anesthetist to give it, one will turn to novocainization rather than expose a tubercular or a pneumonic patient to the dangers of ether.

These factors, then, fixed or varying, will guide our choice of an anesthetic.

I might particularize somewhat more detailedly certain regions and their adaptability to local anesthesia.

The head and neck lend themselves particularly well to nerve-blocking. The nerves lie well anatomically; injections of small amounts of novocain at certain fixed points will anesthetize large areas.

Trephining is easily and painlessly done under local anesthesia. It is harmful to put an unconscious patient with concussion of the brain and with signs of brain pressure under a general anesthetic if it can be avoided. His struggles under gas or ether, anesthetic and post-anesthetic vomiting will increase intracranial pressure and may provoke further intracranial hemorrhage. The adrenalin content of the anesthetic solution helps greatly to reduce bleeding from the scalp. In operations on the face, and especially the mouth and its contents, local anesthesia is invaluable. Post-operative aspiration pneumonia is not entirely done away with—it is induced mainly by the post-operative difficulties in swallowing and expectorating—but its frequency and severity are greatly lessened.

Operations on the neck, even very extensive gland dissection for cancer, may be done safely and easily under local anesthesia. The original form of Schleich's anesthesia with infiltration of the deep parts step by step seems as good as any. The newer methods of paravertebral injection are for the most part unnecessary; they are more likely to cause serious collapse and novocain poisoning than almost any form of local anesthesia. It has been said that patients with Graves' disease are particularly susceptible to novocain; perhaps this susceptibility is due to the adrenalin content of the novocain-adrenalin solution.

Nerve block is the anesthetic of choice for laryngectomy and laryngofissure. The anesthetist and his apparatus are out of the way, preliminary tracheotomy is unnecessary, aspiration much easier to avoid and to control.

Almost all operations upon the bony thorax should be done under local and regional anesthesia. In most of them we have reason to suspect trouble in the underlying lung. A general anesthetic is bad for an inflamed lung. I should like to dwell again upon this fact. Ether chemically damages the lung parenchyma; gas, it is true, does not—but

neither does gas, nor any anesthetic which robs the patient of consciousness prevent aspiration, uncontrollable movements of coughing, suction and expiration under pressure. These uncontrollable respiratory movements are dangerous.

Local anesthesia for single or multiple rib resection, for empyema, or for a more extensive thoracotomy, for lung abscess for instance, is simple and perfect. It makes operation in the sitting position possible, it makes use of the patient's co-operation in emptying his chest and preventing pneumothorax. One may enter the lung easily and painlessly for the drainage of abscesses or areas of gangrene. It is not necessary to anesthetize the lung itself: the lung is insensible to the knife and the cautery.

I am not quite so ready dogmatically to assert that nerve block is the only possible anesthetic for the most extensive collapsing thoracoplasties, such as Schede's operation for chronic empyema, and Sauerbruch's for tuberculosis. Although I have been fortunate enough to have had no fatality among the thirteen patients operated upon under novocain, I must confess that the shock at the end of operation has often alarmed me. I was inclined to lay the blame to the large amount of novocain necessary to anesthetize the whole chest-wall. So that I operated upon my last patient under gas. Her shock was not less than in the others, and lasted perhaps longer. However, there is no doubt that it is both easier and quicker to operate under general anesthesia than with a nerve block alone.

Sauerbruch, too, if one may judge by the statement of his assistant, Brünner, has admitted that he has seen no harm from the careful administration of ether in cases with little or no sputum, although he does his thoracoplasty under novocain as a rule.

More important than the question of anesthesia in extrapleural operations is the problem of anesthesia in operations calling for a wide opening of the chest. I hesitate to broach this subject; my experience has been insufficient, and local anesthesia for these operations seems, as far as I can discover, entirely untried.

Methods, both of positive and negative pressure, are objectionable, especially if the lung is diseased. The flapping back and forth of the lung is alarming, the rapid alternation from insufflation to collapse is terrifying. Even with the most expert anesthetist, one is uneasy. I have had one death on the table during an exploratory thoracotomy. You will concede that even the best of positive pressure anesthesias is exciting and disquieting when the thorax is wide open. Five times I have been put before the problem of opening the chests of gravely ill patients, four with pulmonary tuberculosis, one with lung abscess and massive bronchiectatic pneumonia, in whom artificial pneumothorax had been previously induced. Several times, uncertain of my ability to carry through the operation on the conscious patient, I asked Dr. Botsford to be present so that I might have recourse to her skill if my own efforts failed. I had no occasion to call upon her help. I know of nothing more dramatic than to see these patients breathing quietly

and calmly, their affected lung remaining perfectly collapsed while their chest was wide open with a trap-door through which I introduced my hand and was able to sever and ligate adhesions and to suture the pleura. It was indeed remarkable and interesting. Four of the patients felt a momentary pain when I tore the adherent lung from the parietal pleura with my hand. In the last patient the pain of this rough manoeuvre was lessened if not quite stopped by a subpleural injection made intrathoracically. But one of the patients suffered a temporary access of air hunger. The evolution of this attack was curious to observe. I had opened the chest of a little tubercular girl of 15 with an artificial pneumothorax in order to sever adhesions between the chest-wall and the insufficiently collapsed lung. While the chest was wide open she suddenly began to cough, and becoming frightened moaned aloud. Immediately her lung began to balloon out and to flutter back and forth. The opening in her chest was held closed with a large wet towel; the patient was encouraged and quieted. After she became quiet the wound was opened and the operation proceeded without further ado. Her cough and cries had caused a sudden increase of intrapulmonary pressure, which unbalanced the equilibrium of the pneumothorax. It required but a few moments of quiet breathing to re-establish it.

It seems as though this form of anesthesia may have a future in thoracic surgery, and that for some lung operations a preliminary pneumothorax with local anesthesia following may supplant positive pressure apparatus. I shall report upon the method more extensively later.

Mammary cancer may be removed painlessly under methods of nerve block, but I see no need for them. It seems to me as though this were one of the instances where we had allowed ourselves to be carried away by our enthusiasm. Ether or gas will do patients with uncomplicated cancer of the breast no harm. Freedom of action is the first essential in operation for cancer. Why, then, allow the limitations of regional anesthesia to offer a hindrance? And whether or not the injection of the perineural lymph spaces with novocain solution may not help spread the cancer no one knows. There seems to be no good reason for avoiding general anesthesia in cancer of the breast.

A few simple and typical abdominal operations, those in which the surgeon knows exactly what he is going to do and in which he has no wish to explore the abdomen may be, and sometimes should be, done under local anesthesia. Colostomy, enterostomy, gastrostomy for example, in operations for palpably inoperable carcinoma, or in dangerously ill patients whose bellies need not or should not be explored. But when one does not know exactly what one is about to find, nor exactly what one is going to do, in the great majority of abdominal operations for acute or chronic disease, regional anesthesia sets an unwarranted stop to proper work.

It is a great help to anesthetize the skin and the parietal peritoneum after the manner of Crile, for most of the pain in the course of a laparotomy

comes from the belly wall and not from the viscera. Local anesthesia helps greatly in getting sufficient relaxation under light anesthesia. If we stop the pain with novocain the patient will sleep with gas and morphine almost naturally.

General anesthesia may be further curtailed, especially in dangerously ill patients by infiltrating the abdominal wall and opening the belly under novocain, and then waiting until the patient has been put to sleep before proceeding with intra-abdominal manipulations.

Or anesthesia with gas and novocain may be begun simultaneously. This is especially advantageous in smaller hospitals where delays in draping and scrubbing the patient often prolong the anesthetic quite unnecessarily.

Nerve-blocking alone, paravertebral and splanchnic nerve blocks, are rarely indicated in abdominal operations. Ether and gas do the viscera themselves little or no harm; the delay and limitations of operation under an anesthesia so undependable as the abdominal nerve blocks will more than counterbalance the evils of a general anesthetic. Rarely the lack of facilities for giving gas or unskillful anesthetists may force us to depend upon novocain alone.

Most operations on the bladder, the prostate and the urethra, may be done under local and regional anesthesia. The various forms of sacral injection compete with regional anesthesia; the choice will rest with the skill of the individual operator in one or the other of these methods. The choice between local or sacral anesthesia and gas will often be a matter of personal preference and expediency. Local or sacral anesthesia is perfectly useful and sufficient; the field of bladder and perineal operations is anatomically circumscribed; there is rarely need for unforeseen exploration or extension of the operation beyond the anesthetized areas. Except for simple operations like cystotomy or urethrotomy, operators having a skilled anesthetist and assistants at their disposal will choose gas or ether as a rule. Operators working single-handed, with limited assistance, will incline to injection methods. The patient will do as well by one way as by the other.

Local anesthesia is a hindrance in major operations on the large bones of the extremities. It is invaluable in operations upon the soft parts where the co-operation of the patient is to be desired. It makes tenoplasties and tendon sutures easier and more accurate, it enables the operator to judge of the effects of his procedure there and then, to change the tension of sutures or their position if the first effect is not all that he desires. It is a help in operations on the peripheral nerves.

In the upper extremity I prefer local infiltration to plexus anesthesia, after which I once had happen a permanent ulnar palsy.

#### SUMMARY

Regional anesthesia is invaluable in operations where loss of consciousness is harmful. It is most useful in operations on the skull and brain, on the thorax and on the soft parts of the extremities.

When used after preliminary pneumothorax it

may replace positive pressure anesthesia in certain thoracic operations.

It is usually unnecessary to use local anesthesia unaided by general in abdominal operations. Used alone it is a hindrance to proper exploration; used with general anesthesia it is an valuable aid.

(135 Stockton Street.)

#### THE THERAPEUTIC ASPECT OF SHORT WAVE X-RAYS \*

By ALBERT SOILAND, M. D., Los Angeles

X-ray therapy in general has been actively before the medical profession for a quarter of a century, and its use and limitations are now fairly well established. This statement, however, is not applicable in a general way to the more recent achievement of short wave therapy by means of extremely high voltage. As the use of this method in the United States is limited to less than two years of clinical work, the time element is as yet not sufficient to draw any definite conclusions. Data on this work, however, is accumulating with increasing volume, and we are now in a position to at least discuss intelligently the problems of deep roentgen therapy.

Let it be clearly understood that this is not a new X-ray. It may be called a refinement process, whereby those rays which energize the skin and superficial structures are eliminated and a wave form of X-ray is produced, which delivers its energy to tissues heretofore inaccessible to earlier methods. In other words, we have now available a large amount, if it may be so termed, of deeply penetrating short wave X-rays.

To produce such rays requires an exciting voltage of two hundred thousand. It is also necessary to use specially constructed vacuum tubes to transform this voltage into direct X-ray energy. Next must be considered the electrical requirements which enter into the successful operation of a plant of such proportions, a problem which taxes the engineering skill of the artisan, for here is no plaything which any individual can handle with impunity. The dangers are grave, both from an electrical standpoint, as well as from the X-ray product, the consequences of which, if not directed with intelligence and care, are terrible to contemplate. The discussion of this part, however, may be well left to the specialist who is concerned with the operation of these rays, and will, therefore, not be further dilated upon here.

The first reports of short wave X-ray results came from abroad, accompanied by such enthusiastic accounts that radiologists in America were led to believe that they might as well discard their old equipment, procure the new, and at once reap the benefits of this highly promising form of treatment. The American radiologist is, as a rule, a fairly level-headed individual, and is unwilling to discard a time-tried method before he has had ample opportunity to try out a new. He hoped that the short wave X-ray would accomplish all that was claimed for it, and is now desirous of submitting his observations to you for your own good judgment.

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The clinical conditions which seem to offer the best field for deep therapy are primarily those which have yielded poor results to other known methods. Upon malignant conditions in general, the deep X-ray has made its greatest mark, and while in no sense a curative agent in conditions which are ostensibly incurable, some of the results achieved in these have been so startling as to lead us on in the hope that with further experience and more refinement of technique, many actual cures might be obtained. Those of us who have seen the immediate effect upon large inoperable tumors, both malignant and benign, have marveled at the clinical changes, and while most of these have been of more or less temporary benefit only, the occasional one which shows permanent relief buoys us up in the hope that we may eventually increase this number to a higher degree.

To cure a cancer necessitates the destruction of every aberrant cell involved, and to accomplish this is the end toward which we are aiming. The problem, therefore, of making use of deep therapy is to seek out and destroy these cells with the least possible amount of disturbance to the normal structures or to the host in general. Whenever it is possible to execute this mandate, a cure will result. To do this successfully requires not alone a diagnostic acumen, but a well-founded knowledge of the essentials of radiation therapy. It is obviously impossible to effect a cure in any condition where cancer has become generalized. This accounts for the general failure to cure by any means at our present command a metastasized tumor, using this term in its broad sense. A tumor which has grown by extension and not metastasized beyond the lymph glands in the immediate neighborhood may, by the judicious and adequate use of short wave X-rays, be permanently cured, but if one single cell escapes from the field in question, the cure is futile. This, therefore, is the great unknown quantity. There is at present no assurance that we can deduce by any form of reasoning or investigation that a tumor is localized or circumscribed to a given field. When a tumor is curable, it is manifestly curable to any agent which removes or destroys its activity. It may be successfully attacked by surgery, which in this instance will be considered to include removal by knife, by the actual cautery, by thermal coagulation, or by any chemical agent which destroys it in toto. Such a tumor is also curable by radiation. Which of these methods is to be preferred will depend entirely upon the location of the growth and upon the patient's physical condition. A great many may be successfully mastered by the surgery alluded to, and may be with equal certainty conquered by radiation. The selection of the preferable method should in every case be left to the decision of the skilled clinician.

A great deal has been written upon the effects of the deep X-ray. This varies naturally with the amount used and the condition of the patient. Up to the present time, the skin, which was formerly our greatest source of danger with the lower voltages, seems to have suffered very little from the short wave, but new dangers have appeared and various constitutional disturbances result from

large amounts of the latter. These disturbances are nausea, prostration, a disturbed blood picture, fibrous tissue changes in internal organs, and inflammatory or ulcerative changes in the intestines. These, however, are happily becoming more rare with an increasing refinement of technique. In regard to the nausea, that which is produced by bad air and other electrical disturbances within the X-ray operating room is of very transient nature, but that which comes as a direct result of X-ray action upon the enteric mucosa is distressing. It may last a week or more, following an intensive course of deep radiation. Patients vary greatly in their susceptibility to this. There are some who do not become nauseated when subjected to a most intensive course of radiation. The blood changes and anemia are due to a perverse biologic action upon the lymphocytes, which are very susceptible. The red cells are more resistant, but even they would probably succumb to prolonged intensive radiation. Prolonged action upon any of the abdominal organs sets up destructive changes in the intestinal canal, acting primarily upon the intestinal flora, where coagulation and localized necrosis may occur in susceptible fields. This is followed by a production of tox albumins, the absorption of which may be attended by a distressing clinical picture, accompanied by colitis, bloody stools, and a general physical depression. Recovery is usually prompt upon cessation of the radiation. This clinical picture, however, is obtained only when attacking an extensive abdominal malignancy, where the results are at least equal with those of surgery, and as the radiative sequelae do not measure up in intensity with those of surgical shock, the end comparison is obvious.

The writer has been making use of this deep X-ray therapy for a little over a year. During this time he has subjected a great many patients, with various suitable lesions, to an intensive course of deep therapy, making serviceable all the factors which enter into the approved methods of application. He feels that, while a great advance has been made and that results heretofore impossible to obtain have accompanied this new method, yet not sufficient time has elapsed to properly placard results with mechanical precision. It appears that with the short waves a greater range of clinical conditions can be encompassed, but that in our attack upon gross pathology we still have to reckon with every therapeutic agent which has heretofore been given us. That in this attack, the new short wave X-ray is the most formidable weapon so far produced, can now be considered an undisputed fact.

The present development of radiation as applied to treating the sick makes it imperative that the medical man guard this with the utmost rigor, to keep it from becoming the property of the charlatan, who is already encroaching upon the traditional rights of our profession. It is high time that the general practitioner of medicine and surgery sever all connection with the lay radiographer and the commercial laboratory, and jealously guard this potent force from becoming common property. Too much can scarcely be said about the dangers associated with high voltage X-ray work, the knowledge and prevention of which tax

the skill and ingenuity of the highly trained physician and electrical engineer. The medical profession as a whole is aware of this fact, and also that a political layman placed before the last California State Legislature a bill to permit other laymen to take this dangerous agent and use it upon an innocent public under restrictions which are pitifully inadequate, both as to the qualifications of those who may use this agent and as to the limitations placed upon its use. That such an act should be permissible in this enlightened age is merely another instance of the commercial greed of the medical parasites who, with the aid of politicians, are continuously undermining the standards of scientific medicine and surgery, and flooding the country with a host of undesirables, perhaps more threatening to our civilization than the Red Bolsheviks of Russia.

Note by Author—Bill referred to passed Assembly and State Senate about six weeks after the presentation of above article. When it reached the Governor's desk for his signature, a flood of protests from some of the members of the California medical profession caused him to withhold his signature and thereby nullified the act. In the last meeting of the American Medical Association, a resolution was adopted by the House of Delegates, recommending that radiology be considered an integral part of the practice of medicine and surgery.

(1407 South Hope Street.)

**Health as a Means and Not an End**—The trouble with these groups who follow the teachings of fadists and special cults is that health is thought of as freedom from disease, as an end. This view is quite commonly expressed, and in these days of great interest in the health movement it constitutes a real danger. It may be stated categorically that health should never be sought as an end, except perhaps by the individual sick in bed. To be conscious of bodily processes, to think too much about one's self, is not only undesirable socially, but also is distinctly unwholesome for the individual. No person may with impunity be too greatly concerned about his health; for, the moment he does, he runs the risk of losing it.

The health motive must be made secondary to objective interests and achievements. As educators it is important that we sense this relationship and guide the program of teaching toward goals of service rather than toward those of personal achievement. Health is to be viewed therefore only as a means for the accomplishment of worth-while things for the world. "Health for health's sake" is not an acceptable slogan. The poseur and the dilettante in health are no more acceptable than the poseur and dilettante in art. That splendid specimen of man power, that wonderful organization of vitality in the healthy woman—are such sufficient unto themselves? Surely no educational theory would seek to justify the development of mental power for its own sake; likewise it will find impossible the plea of those who seek health for health's sake. Rather will it defend the view that health is only of value, only of significance, as it is used in socially desirable ways. The social consciousness of our day asks that we act as trustees of life, enriching it where we may, but always conserving it for worthy ends, ready to spend it all if the demand be great enough.

Health as freedom from disease is a standard of mediocrity. Health as a quality of life is a standard of inspiration and increasing achievement. The hope may be expressed that the great interest in health education today shall be directed toward not only scientifically acceptable goals, but also goals that shall be worthy.—(Jesse Feiring Williams, *Hygeia*, September, 1923.)

## HEART FAILURE: ITS UNDERLYING CAUSES, CLINICAL MANIFESTATIONS AND TREATMENT\*

By WILLIAM J. KERR, M. D., San Francisco  
(From the Medical Division, University of California Hospital.)

The increasing death rate from cardiovascular disease is attracting widespread attention. As the expectancy of life rises, we see more individuals reaching the age when certain vascular and myocardial disorders are prone to occur. We are constantly seeking the underlying causes of these maladies which we are called upon to treat, keeping in mind the idea of prevention. These causes probably often lie hidden in the earlier period of life associated with infections, intoxications, nutritional disorders, congenital malformations, hereditary, and other obscure factors. Medicine of the future will probably deal more with the prevention of such of these as are preventable when the methods by which they are produced are more fully understood. The role of the clinician in the treatment of end results of disease is too often unsatisfactory and much like the patch-work of the cobbler. This is probably more applicable to cardiovascular disease than of any other group.

With the increasing morbidity and mortality from cardiovascular disease, we would have a clearer conception of heart failure, its predisposing causes, clinical manifestations, and treatment. Unfortunately, the only notion many physicians have of heart failure is conveyed to them by heart murmurs or irregularities. They neglect the most important factor in estimating the efficiency of the circulation; namely, the efficiency of the heart muscle itself. The back-pressure theory has done much harm by directing attention away from the physiological functions of the heart muscle. MacKenzie's conception of a "rest force," which is employed to maintain an efficient circulation when the body is at rest, and a "reserve force," which is called into action when effort is made, is more readily acceptable. The "reserve force" is the first to suffer and, if the damage is extensive enough, the "rest force" is impaired and the body even at rest shows evidence of inefficiency resulting in dropsy, dyspnoea, and a multitude of other signs which may be included in the wide sense under the term "heart failure." MacKenzie's definition of heart failure is a broad one—"Heart failure may be defined as the condition in which the heart is unable to maintain an efficient circulation when called upon to meet the efforts to the daily life of the individual."

### THE UNDERLYING CAUSES OF HEART FAILURE

When we seek to correlate the pathological changes in heart failure with the clinical manifestations, there is great variation and confusion. Our findings are in no better accord than are the pathological changes, clinical symptoms, and signs and functional studies in renal disease. The parallel serves to point out the importance of recognizing functional efficiency rather than structural changes

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in dealing with these two vital organs. The frequency with which heart failure ensues with no demonstrable lesions in the heart muscle is of significance. Instrumental methods as an aid in detecting and understanding the irregularities have served to clear up some of these obscure relationships. Others await more delicate methods of study.

The conditions which precede and which are often confused with heart failure may be classed as (1) infections usually rheumatic and not including syphilis, (2) syphilitic infections, (3) arteriosclerosis, (4) nephritis and hypertension, (5) thyroid disease, (6) congenital defects. These various groups usually occur at certain age periods, and lead to changes in the heart muscle which may bring about heart failure. They may be spoken of as predisposing causes of heart failure. They are probably not the only predisposing causes, but make up a great majority. Just when in a given case heart failure will take place is difficult to determine, but we can prophesy in a general way within the various groups. We know from experience that patients with continuous hypertension usually terminate with heart failure. Patients with rheumatic valvular disease run a progressive course with heart failure developing sooner or later, the nature of the symptom-complex usually depending upon the location and extent of the valvular and myocardial lesions. Thyroid intoxications if unrelieved lead to extensive damage of the heart ending in heart failure. Syphilitic disease involving the aortic valve tends to early heart failure. Arteriosclerosis may manifest itself in a variety of ways. Among the most frequent consequences are obstructive lesions of the coronary vessels with degenerative changes in the muscle supplied by these vessels resulting in ultimate heart failure. Subacute and acute endocarditis associated with septicemia and presenting a rather uniform clinical picture seldom die of cardiac failure, but more frequently as a result of septicemia, embolism, pneumonia, or nephritis.

The recent widespread use of instruments of precision in the study of heart disease has been of great service in clearing up the mysteries of the irregularities. The present extent of our knowledge in this field makes it possible for the well-trained clinician to dispense with instrumental means of diagnosis in most instances. To the great majority of practitioners, however, irregularities spell disaster. This is evidenced by the frequency with which patients with sinus arrhythmias are referred for electrocardiogram and opinion. Instrumental means have shown the frequent occurrence of such irregularities as paroxysmal auricular fibrillation, paroxysmal auricular flutter and paroxysmal tachycardia which formerly were considered synonymous with heart failure. We now know that even permanent auricular fibrillation and complete heart-block may be compatible with an active muscular life without signs of heart failure. There has been much discussion concerning the importance of extrasystoles or premature contractions and, when further work has been done over a period of many years in patients presenting such irregularities, we shall probably attach more significance to them. Recent studies with quinidine have served to throw

new light on the nature of some of these irregularities, particularly in auricular fibrillation.

#### CLINICAL MANIFESTATIONS OF HEART FAILURE

When we attempt to enumerate the clinical manifestations of heart failure, we are confronted with a seemingly hopeless task. We see patients whose "reserve force" is encroached upon to the slightest extent and who show dyspnoea only on severe exertion. At the other extreme we see patients whose "rest force" is so impaired that they are unable to undergo the slightest exertion without marked dyspnoea, with extensive passive congestion, cyanosis, and other associated signs. Between these lie all gradations.

Among the earliest symptoms to be noted in the congestive type of heart failure are dyspnoea with severe exertion; slight cough toward the end of the day; varying degrees of precordial and substernal pain; upper abdominal pain associated with distended liver, congested stomach or pain referred from the heart muscle or pericardium; and such symptoms as giddiness, palpitation, and a feeling of faintness. The latter group are subject to a variety of interpretations, as patients differ widely in their description of such symptoms. As the failure becomes more severe, the symptoms tend to increase; the dyspnoea and cough show a definite advance; such signs as dependent edema appear late in the day; the heart shows variable degrees of enlargement; irregularities may be present; the vital capacity is reduced and passive congestion is more evident. Venous engorgement appears; the venous pressure is increased and pulsations in the peripheral veins, as well as the jugulars, may be noted. The urine begins to show signs of the renal congestion present. With the onset of the more advanced stages, the above-mentioned symptoms and signs increase until marked dyspnoea and orthopnoea are present, and prevent the patient from undergoing the slightest effort. The congestive signs are now extreme, anasarca appears, the vital capacity is markedly reduced and, unless proper treatment is instituted, death is likely to ensue.

While this picture illustrates the sequence in a considerable number of cases of heart failure, there are many cases where few or none of these symptoms may be found. Patients with hypertension, syphilitic infections of the aortic valve, rheumatic endocarditis involving primarily the aortic valve and others may, when presenting quite efficient circulatory systems, suddenly develop a pulmonary edema, and die. Patients with the symptom complex of angina pectoris may die in the first attack or may suffer for years and die of some other condition. Myomalacia may develop without warning from embolism or arterial occlusion, and lead to fibrosis or aneurysm of the heart wall without presenting the usual signs of congestive heart failure. A heart wall may rupture with sudden death of the patient without giving rise to signs of warning. The inception of unusual rhythms may herald the onset of heart failure, and such irregularities as ventricular tachycardia or ventricular fibrillation may cause death without previous symptoms or signs of heart failure. Stokes-Adams syndrome may

be observed in patients over periods of many years without great impairment of the circulation, or death may ensue in one of the attacks.

#### TREATMENT

The greatest degree of success in treatment is to be achieved in the group spoken of as the congestive type of heart failure. Rest is most essential. If the condition is moderately advanced or severe, the circulatory system should be relieved as much as possible by limiting the fluid intake, free purgation, and diuresis. Collections of fluid in the body cavities interfering with respiration or heart action may be removed. Karel diet may be employed during the first few days if the edema is excessive. After this a dry diet should be given and should only meet the bodily needs. The comfort of the patient is of extreme importance throughout treatment. Patients with orthopnoea should be well supported in bed or chair with a firm, well-padded board or contrivance upon which to rest the arms, and relieve the embarrassment of respiration. Pain should be relieved by small doses of morphine, especially during the first day or two of treatment, as pain prevents proper rest. The drugs employed depend entirely upon the conditions present. If auricular fibrillation is found and the rate is rapid, digitalis should be started at once. The preparation must be of known potency and should be given until results have been obtained unless toxic symptoms prevent further continuance. This may be given rapidly by the Eggleston method or preferably by 4 cc. doses of standardized tincture every six hours over a longer period of time in general practice. It matters little in what form the drug is given, so long as the clinician knows his preparation. It is deplorable to see how badly we administer such a valuable remedy. Despite the many noteworthy contributions on the subject, many clinicians continue to prescribe ten drops of a tincture of doubtful source when we have demonstrated to students for years that it takes from thirty-five to sixty drops with the ordinary medicine dropper to make a cubic centimeter, which is the standard dose of a standard tincture. We should either have at hand calibrated droppers or graduates for the patients to use or dilute the tincture, and give in teaspoonful doses. It would be preferable, however, if we dispensed entirely with the tincture except in hospital practice, and gave the dried leaf in 0.1 gram or 1½ grain doses in pill or capsule form. The hypodermic or intravenous use of digitalis preparations are seldom necessary and their use too often unsatisfactory because they are given in hopeless conditions.

A drug such as caffeine sodio-benzoate is often of value, especially in patients with hypertension and cardiac failure to relieve respiratory irregularities. Caffeine may prove to have some value when given intravenously in emergencies for cardiac or circulatory failure. When syphilis is an underlying cause of heart failure, proper treatment with iodides, mercury, and the arsenicals may be of great

value, but should be given with great caution. Quinine compounds, especially quinidine preparations, have been of great value in controlling some of the irregularities. Auricular fibrillation responds to treatment in a majority of the cases, and further attacks may be prevented by its continued use. In this way quinidine relieves the heart of conditions which interfere with the proper function of the heart, and in so doing aid in the treatment of heart failure.

Patients with pulmonary edema may respond to bleeding, especially with right heart failure. Patients who have for long had hypertension and who present pulmonary edema with a low blood pressure probably should not be bled. Atropin or adrenalin may here be of value. In those who have had hypertension and who slowly or periodically show signs of heart failure, it is interesting to note that symptoms and signs are present if the pressure falls below a certain high level. Some of these symptoms and signs are congestive in type. Others are mental. Other patients may present cerebral symptoms only when the blood pressure is high. Whether these episodes are spasmodic in nature, it is difficult to say. It is frequently found that there is a narrow limit of circulatory efficiency in which the patient appears to be most comfortable. The treatment of this group is most difficult and often very unsatisfactory because of the economic and other factors which cannot be controlled.

The thyroid hearts respond well to treatment if the damage is not too extensive and do not offer any special problem if the disease of the gland can be corrected.

The arteriosclerotic heart presents such a variety of symptoms and signs that no definite criteria can be laid down for treatment. The activity of the individual should be limited to what the heart is able to do. Iodides may be of value. Mercury does no harm. Attacks of angina pectoris usually respond well to nitrates. Surgery for nerve resection may be tried. The persistent pains associated with extensive damage of the heart wall do not respond so well, and usually indicate an early death.

#### SUMMARY

Heart failure should be recognized as the inability of the heart muscle to maintain the circulation for the ordinary needs of the individual. It is not expressed in terms of murmurs, irregularities, pain or other signs or symptoms, which may be associated, but rather as the result of a variety of underlying causes which act to render the function of the heart muscle ineffective.

The clinical manifestations of heart failure are obviously manifold and variable, based upon a broad interpretation of the term. The manifestations of congestive heart failure represent the common group and have many points in common.

The treatment of heart failure is more satisfactory in the congestive group. Syphilitic infections of the heart respond well to judicious treatment. A drug, as useful as digitalis, especially in the pres-

ence of cardiac failure with auricular fibrillation, has an established place in our armamentarium. Ten drops of a standard tincture, given with an ordinary dropper three times a day, can have no conceivable value in such cases. The further use of the tincture for home administration is to be deplored, unless given in known dosage of a standard preparation until results have been achieved.

#### DISCUSSION

**Dudley Fulton, M. D. (Pacific Mutual Building, Los Angeles)**—The broad conception of heart failure and its treatment, as expressed by Kerr, represents the best clinical teaching. Certain points should be emphasized. There is no parallel between the pathology of the heart, as ascertained by physical examination, and its functions. While murmurs are important in the diagnosis of organic disease of the heart, they play a very minor role in prognosis, since the heart may maintain the circulation over prolonged periods with any one of its valves totally destroyed. The functions of the myocardium form the ground-work of the present knowledge of the heart. In one of the largest clinical groups, the cardiac disease associated with hypertension, nephritis and arteriosclerosis, the evidence is strong that the initial pathology arises elsewhere in the vascular tree than the myocardium, probably in the smallest arterioles, the cardiac and the renal changes being secondary processes. The term "circulatory failure" in this group is more accurate than "heart failure."

This conception broadens therapy to the adoption of measures conducive to the maintenance of the circulation as a whole rather than to stimulation of the heart.

Emphasis should be given another important principle enunciated by Kerr. While we can never repay our debt to the stethoscope and electrocardiograph, their employment having given us interesting and valuable academic details concerning the functions of the heart, we must admit, however, that it is bed-side study and observation that gives us the practicable information as to how sick our cardiac patient is, and what should be done for him. Instrumentation has been overdone in that the examination of the patient himself is neglected.

Of first importance are the subjective symptoms of the patient. They present the earliest and most dependable evidences of a failing circulation. This includes the proper interpretation of dyspnoea and precordial distress, following anything which increases the heart beat, such as exertion, meals, and mental excitement. A consideration of edema of the liver and extremities, lessened urine output, cyanosis and pallor clearly outvalues the timing of a murmur. It is interesting that disturbed cardiac rhythm offers the best indications for drug treatment. While digitalis is always indicated in broken compensation of the heart, its effects are usually disappointing except in auricular fibrillation and sometimes auricular flutter.

We disapprove, however, the use of the very large doses of digitalis recently advised, except by the cardiac expert, in the disturbances mentioned above. McKenzie considers that digitalis is as sharply limited in diseases of the heart as quinine is in fevers.

The same criticism, in our opinion, applies to quinidine. Its use in general practice should be deferred until its precise indication and dosage are better determined than at present. Disaster has followed its use in a sufficiently large number of reported cases to justify this conservatism.

**Dr. Kerr (closing)**—I am very glad to have the opinion of Dr. Fulton on the points which I brought out. His wide experience in internal medicine makes these opinions extremely valuable.

#### THE ESSENTIAL POINTS IN THE TREATMENT OF DIABETES WITH INSULIN \*

By W. D. SANSUM, M. D., and  
N. R. BLATHERWICK, Ph. D.

(From the Potter Metabolic Clinic of the Santa Barbara Cottage Hospital, Santa Barbara, Calif.)

The work of Banting and Best and their associates in the isolation and clinical use of the sugar-metabolizing hormone, insulin, and its specificity in the treatment of diabetes is now well known and accepted. There remains the general problem of further perfecting the methods of its use.

Since the advent of insulin, 250 diabetic patients have been admitted to this clinic. Of these, 150 have been severe enough to warrant the use of insulin. It is beyond the scope of this paper, which is intended to outline methods of treatment only, to present the clinical data at hand. The clinical results from the first 100 cases have been carefully summarized and will appear at an early date in the *Journal of Metabolic Research*.

In the treatment of diabetes there are three objects to be attained:

1. The patient should be kept continuously "sugar free," and the blood sugar should be normal.
2. The patient should be kept continuously free from acidosis.
3. The patient should be nourished as evidenced by a satisfactory weight.

These conditions may be fulfilled, in many instances, by careful dietary procedures, although when a patient's tolerance is very low, continuous bed-rest is necessary to avoid a serious loss of weight. If the disease becomes progressively worse, as it usually does in severe and untreated cases, a stage is finally reached when the patient can no longer be kept free from sugar and acidosis, even if the most careful attention is paid to the diet and the patient is kept continuously in bed.

Many patients wait too long before beginning careful, dietetic management, and specialists in the treatment of this disease are, therefore, not given a fair chance to do the best work. Dr. Joslin has collected the statistics, showing the advantages of careful treatment. Between the years 1814 and 1914 the death rate from diabetes in patients who were treated in the best hospitals was 28 per 100 per year. The year 1914 marked a significant advance in the dietary treatment. The principles outlined in the first paragraph were carefully adhered to. In patients so treated the death rate has fallen to 4 per 100 per year.

By the use of insulin, the death rate from diabetes may be reduced to zero if the patients are seen before deep coma has developed, and patients who would otherwise remain chronic invalids may be restored to health by ample diets in proportion as this specific extract becomes available. At the present cost it is not available to all. It is not a cure for diabetes. Patients will need to exercise greater care than ever with their diets, but since these diets will be ample for their needs, they will be fully repaid for the additional efforts.

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In the treatment of diabetes with insulin there are four conditions that should be satisfied:

1. The sugar-burning or utilizing power of the insulin, in grams per cubic centimeter, should be known.

2. The patient's natural tolerance should be determined in grams of sugar-formers.

3. The exact value in sugar-formers of the proposed diet should be known.

4. The dosage of insulin may then be adjusted to make up the difference between the sugar-formers of the proposed diet and those of the patient's natural tolerance.

The sugar-formers of the diet designated by "G," Woodyatt, are 100 per cent of the carbohydrate, 58 per cent of the protein, and 10 per cent of the fat. It has long been known that all starches are changed into sugar during the process of digestion. When the protein molecule is digested it is split into proteoses, peptones, and eventually into amino acids. Some of the amino acids may be changed into sugar, while others may be changed into fatty bodies. The neutral fats are the glycerolesters of fatty acids. Glycerine is a sugar-former. The reduction of food values and tolerances to the common denominator sugar-formers very materially simplifies the calculations.

1. The sugar-burning power or utilizing power of the insulin should be accurately known. Eli Lilly's iletin is evaluated in rabbit units. In our experience, their present unit is worth a little less than 1 gram of sugar-metabolizing power. Their H-20 product, which indicates 20 rabbit units in each cc., has a sugar-metabolizing power of 17 grams.

2. The patient's tolerance may be determined by diet alone or by diet plus insulin. When diet alone is used, the patient is desugared by partial starvation. When sugar-free, diet additions are gradually made. A diet is eventually found upon which the patient can remain continuously free from sugar in the urine and with a normal blood sugar. Suppose such a diet contains 35 grams of carbohydrate, 38 grams of protein, and 83 grams of fat. The sugar-formers of such a diet are 100 per cent of 35, plus 58 per cent of 38, plus 10 per cent of 83; or 35 plus 22.04, plus 8.3, or 65.34 grams. We would say that such a patient has a natural tolerance of 65 grams of sugar-formers.

In the terminal stages of diabetes, patients do not endure starvation well, both because of the existing acidosis and their already marked emaciated conditions. Many of them cannot be desugared by any dietary procedure, since their natural tolerances are too low to permit of even bed-rest maintenance diets. In such cases, tolerances may be determined by diet plus insulin. If the acidosis is not too severe, a patient may be given a bed-rest, maintenance diet similar to the above which contains a little more than 1000 calories, with 65 grams of sugar-formers. Small doses of insulin are given at first. The insulin is gradually increased until the patient is continuously free from sugar. Suppose that it requires 60 grams of assistance, in the form of insulin, to carry the above diet, the patient's natural tolerance

would then be 65 less 60, or 5 grams of sugar-formers.

If the patient has a severe acidosis, no attempt is made to measure the patient until the acidosis is controlled. We control the acidosis by giving the patient a diet rich in carbohydrate, low in protein, and as free as possible from fat, such as an oatmeal, skimmed milk, orange juice diet, using comparatively large doses of insulin, which, as it metabolizes the carbohydrate, will in turn metabolize the fat, and thus dissipate the acidosis.

3. The exact value of the proposed diet should be known. We consider 80 to 100 grams of protein as ample for the needs of an adult. In adjusting the fat we have followed the formula of Woodyatt's optimal diets, never letting the fat actually oxidized exceed two times the carbohydrate plus one-half the protein. Following this plan, a diet "G" of 65 will carry approximately a 1000 calorie diet, and a diet "G" of 120 will carry a 2000 calorie diet.

4. The adjustment of the dose. Suppose that the natural tolerance of a patient, as determined either by diet or by diet plus insulin, is found to be 65. Suppose that the proposed diet contains 133 grams of sugar-formers. The patient will need 133, less 65 or 68 grams of assistance; 68 divided by 17 will then equal the number of cc. of the Lilly iletin required, or 4 cc. In our experience, we have found that in the majority of patients, with an equal distribution of food between the three meals of the day, that  $\frac{2}{3}$  of the total dose should be given before breakfast and  $\frac{1}{3}$  before supper. In this instance, we would give 2.5 cc. before breakfast and 1.5 cc. before supper.

#### THE SYMPTOMS AND TREATMENT OF THE OVER-DOSAGE WITH INSULIN

When a rabbit is given an excessive dose of insulin the blood sugar rapidly falls. When it reaches about .04 per cent, convulsions occur, which are promptly relieved by the administration of glucose.

Patients may also become too sugar free from an overdosage with insulin. This may occur from unfamiliarity with the drug. It occurred with us more frequently in the past when the strength of the insulin was not standardized as well as it is now, especially, as with improved methods of preparation, we were making more potent extracts. It may occur if a patient's tolerance is unknown, and if his diet is not carefully estimated, when it would be impossible to properly adjust the dose, even if the value of the insulin were accurately known. Overdosage with insulin excusably occurs in the first few weeks of treatment when, by keeping the patient continuously free from acidosis and urinary sugar, his tolerance usually grows very rapidly. Under these conditions, the symptoms of overdosage are usually mild and easily treated if the patient is taught to recognize them early.

#### THE SYMPTOMS OF OVERDOSAGE

1. Hunger—As a patient's blood sugar falls, he usually experiences a keen appetite. This is not a very reliable symptom, because nearly all diabetic patients are notably hungry.

2. Slow Mentality—A patient complains that

he cannot think well or concentrate on any one thing.

3. Extreme Weakness—This is probably the most reliable early symptom. When a patient is metabolizing an ample net diet, he should feel well and strong, but as he is overdosed with insulin a feeling of weakness comes on. Sometimes patients describe this as a dizzy feeling.

4. Rapid Pulse and Respiration—The pulse is usually weak and the respiration rapid.

5. Visual Disturbances—The patient complains of an inability to read, due to double vision or the blurring of the print. He cannot see to write well. The eyes may ache and dark spots may appear before them.

6. "Shaky Feeling"—The word "shaky," or "The Shakes," are terms that have been coined by patients to describe this sensation and, though not particularly scientific, describe the condition very well. The patient simply shakes all over. He is not cold, nor are these symptoms associated with or followed by appreciable elevations of body temperature. We believe that this symptom is nature's method of causing the glycogen which has been stored in the liver and muscles to be changed into glucose and poured into the blood stream.

7. Sweating—The "shaky" feeling is always followed by a profuse sweat. This must be watched for, especially in new patients, since it is a very reliable symptom.

8. Unconsciousness—If a patient has been too seriously overdosed he may become unconscious, falling into a deep sleep from which it is impossible to rouse him until sugar has been administered. At this stage he cannot be forced to swallow fluids.

9. Convulsions—If the overdose has been still greater, convulsions may occur. Fortunately, these are very rarely seen in patients, but are a common occurrence in the rabbits. In our experimental evaluation of insulin we have used thousands of rabbits, and in thousands of them such convulsions have been produced, but despite such marked overdosage, only a few have died in the entire series. The intravenous administration of 5 cc. of a 20 per cent solution of glucose restores such convulsed rabbits in two or three minutes.

#### THE TREATMENT OF THE OVERDOSAGE WITH INSULIN

The treatment of the overdosage with insulin is undoubtedly started by nature as she changes the glycogen stores into sugar and pours them into the blood stream. In this clinic, whenever a patient experiences the slightest symptoms of being too sugar-free, 20 grams of milk chocolate, having a food value of carbohydrate 10, protein 2, and fat 7, are given at once, followed by or dissolved in hot water. No attempt is made to determine whether the urine or blood is too free from sugar, for we much prefer to give this emergency ration many times when it is not needed rather than to omit it once when it is needed. The milder symptoms, such as hunger, are promptly relieved by serving the tray a little early. The patient in the early stages of treatment is instructed never to leave the hospital without the emergency, chocolate ration. Many other substances containing

sugar-formers could be used and are used in lieu of the chocolate. In the beginning we used white crackers, but the starch must be changed into sugar before it can be absorbed. Later we used whole milk, but half-pints of whole milk do not stay sweet any appreciable length of time and are difficult for the patient to carry around with him. Orange juice, when available, is an excellent form of a rapidly assimilable carbohydrate. Adrenalin may be administered hypodermically, which causes the body to rapidly change large quantities of glycogen into sugar. In our experience, the milk chocolate, especially when followed by or dissolved in hot water, has proven to be an excellent form of medication. It is also very acceptable to the diabetic patient who, for so many years, has been without candy. Patients often welcome too sugar-free symptoms because of the chocolate candy reward, and oftentimes nibble away at the chocolate to make it last as long as possible, when they should eat it as rapidly as possible.

If a patient cannot swallow, glucose should be given by vein at once. We keep on the hospital floors a number of ounce bottles of sterilized 50 per cent glucose and a 25 cc. syringe sterilized for instant use, although we are rarely obliged to use this type of medication. We have had no fatalities from an overdosage with insulin.

#### DISCUSSION

**Samuel H. Hurwitz, M. D. (516 Sutter Street, San Francisco)**—The great value and the specificity of insulin in the treatment of diabetes mellitus has already been conclusively proved. Now that the use of this extract is to become more general among the practitioners of medicine it is very important to acquaint them with its indications, method of use, and symptoms of overdosage. This has been well accomplished by Dr. Sansum's simple and straightforward paper. It is particularly gratifying that he has emphasized the importance of dietary treatment in connection with insulin and the fact that we shall need to exercise even greater care with our diets than heretofore, so as to establish in each individual patient a balance between dietary needs and insulin dosage. Where this is carefully done there need be little fear of the symptoms of overdosage which Dr. Sansum has given so vividly.

In this connection I should like to correct the impression which it appears exists among some physicians that the use of insulin will do away entirely with the necessity for moderate undernutrition. The fundamental principles upon which low caloric diets have been used in treating diabetes still remain. These diets will still continue to serve as a very useful method of resting pancreatic function and of thereby improving the patient's tolerance. But the extreme grades of undernutrition necessary in severe cases in pre-insulin days need no longer be resorted to where insulin is available. It has been the practice in our clinic to give patients a diet which, although adequate to regain health and strength and to maintain normal activity, was nevertheless a little lower rather than a little higher calorically. We have felt that it was wiser to err on the side of lower rather than higher diets. This has not been easy to do at all times because we have had, in the first instance, to yield to the patient's cry for more food, and secondly, because of the widespread misinformation existing among patients that, with insulin available, they could partake of many glucose-forming foods which had been denied them heretofore. Although this is true to a limited extent, we have had to

emphasize to these patients on numerous occasions that they were paying too dearly for the whistle, and that an additional slice of bread or one-half of a cantaloupe was not worth the price of the insulin used to burn them with. Besides, this would violate the principle of rest as applied to pancreatic function.

The sugar-burning power of insulin, Lilly has not been found by us to be a constant one. In some of our severe diabetics the glucose-utilizing power of one unit of insulin was found to be less than one gram of glucose; whereas, in some milder cases, one unit of insulin was found to be the equivalent of five or more grams of glucose.

**W. D. Sansum (closing)** — We are very pleased that Dr. Hurwitz has emphasized so strongly the importance of exact dietary procedures.

We are attempting to restore all patients as rapidly as possible to a normal weight, because, when fully nourished, patients require somewhat less food for the same activities than do the under-nourished ones. A layer of normal, subcutaneous fat appears to be an appreciable asset in the conserving of body heat.

In our experience the present iletin unit is not as strong as was the original unit. When the unit was defined as the amount of iletin necessary to produce a convulsion in a one-kilogram rabbit, we found this unit worth approximately 1.25 grams of sugar-metabolizing power. With the new definition of the unit as one-third of the iletin necessary to produce a convulsion in a previously starved, two-kilogram rabbit, we have found the value of the unit in the neighborhood of .85 grams.

Our experience has been different from that of Dr. Hurwitz, in that the sugar-metabolizing power of the unit has not varied appreciably in patients of different degrees of severity. We have also found no appreciable variation with age and weight or with low and high diets. We believe that the comparatively high values given by some workers to the iletin unit in the milder cases should have been credited to growths in natural tolerance, for in a number of such instances we have re-measured patients dietetically and found growths in tolerance sufficient to convince us of the constancy of the sugar-metabolizing power of the unit in a given lot number.

**Household Nursing Association**—In another column we print an article outlining the work of the Household Nursing Association of Boston. This institution has not attracted the attention of either the public or the profession which it rightly deserves. It has not sought publicity but has quietly perfected its organization and raised its standards while it has been supplying a type of economical and efficient home nursing care for patients of moderate means.

The demand for such nursing has been recently receiving more attention from important medical sources but it should be a matter of local pride that public spirited citizens and physicians of Boston have anticipated this demand and to the extent of their ability have been supplying it for the last ten years. The highly trained graduate nurse has become a necessity but is often a problem as well. The old-fashioned attendant nurse is often a far more difficult problem but sometimes a necessary substitute. Supervised attendant nurses of good character and trained by a standard curriculum in the simple household duties of caring for the sick will go far toward solving these problems and will soon we believe take their place as necessary adjuncts to the efficient and kindly care of patients of moderate means. We urge our readers to become acquainted with this association's work and give it their support.—Editorial, Boston Medical and Surgical Journal, May 10, 1923.

## THE ETIOLOGY OF GASTRIC AND DUODENAL ULCERS\*

By GEORGE E. EBRIGHT, M. D.,  
University of California Medical School

It is evident upon reviewing clinical experiences and the literature upon the causation of gastric and duodenal ulcer that the etiology of these conditions cannot be reduced to a very simple formula. A varied number of conditions may induce ulceration of the stomach. It occurs in association with traumatism, diseases of the central nervous system, renal and cardiac diseases, anæmias, burns; but particularly since Virchow in 1855 emphasized the probability of vascular conditions playing a role in the production of ulcer, has attention been directed to embolism and thrombosis, particularly of bacterial origin. In 1857 Lebert injected pus into the venous circulation and produced acute gastric ulceration. Twenty-two years ago Letulle caused gastric ulceration by injecting guinea pigs with streptococci from puerperal sepsis. Clinical experiments for several years past have led observers to notice the association of an acute gastric ulcer with the occurrence of various acute infections, especially tonsillitis and aveolar abscesses. The important work of Billings upon focal infections has directed attention to probably the most common cause of not only the occurrence of ulceration, but especially the continued recurrence of the lesion. Rosenow's extensive studies have led him to the conclusion that "streptococci attaining a certain grade of virulence show a selective affinity for the gastric mucus surface." The expression of this view has led to considerable controversy. Moody, after experiments upon rabbits, opposes Rosenow's theory of selective affinity, and found that streptococci from aveolar abscesses produced lesions more frequently elsewhere in the body than in the gastroduodenal mucosa. Alanson Weeks is emphatic in his opinion based upon work with war risk insurance cases, that chronic gastric ulcers do not heal until focal infections are cleared up, particularly tonsils and teeth. E. J. Best, in charge of the Gastrointestinal Clinic of the University of California, leans to the same conclusion.

Very considerable experimentation has been directed toward the establishment of a relation between nerve influences and gastric ulceration, and particularly suggestive is that of Gundelfinger, who, after a series of ingenious experiments of vagus irritation, vagotomy, coeliac ganglion irritation, excision of coeliac ganglion, and combinations of these operations, arrives at two conclusions—first, that neither vagus irritation nor vagotomy causes gastric or duodenal ulceration in the dog, but, on the other hand, that coeliac ganglion irritation or extirpation caused erosion or ulceration in a hundred per cent of his cases. Doege expresses the opinion that psychic influence is a very prominent factor, and recalls a case where an individual dated the beginning of his ulcer from a period of highly excited state of emotionalism after an especially full meal. When one remembers the work of Pavlov upon the effect of emotional states on

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gastric secretion, it may be readily understood that mental excitation may bring about a disharmony or gastric function that could have the same effect which Gundelfinger described, and, furthermore, it should be pointed out that long-continued mental excitation or depression should be expected to be followed by similar results. A case in point is as follows:

A man, 45 years of age, who had always experienced excellent health suffered a profound grief upon the death of a child, an only son of great promise just reaching maturity, who had been the center of his thoughts and ambitions. Following his son's death, the patient labored under a burden of mental depression, which culminated in nervous indigestion, and he presented himself to me some five months later suffering from a well-pronounced ulcer with severe pain in the epigastrium several hours after eating, which was relieved by food, aggravated by pressure associated with vomiting and slight bleeding, and upon fluoroscopic examination showed a deficient duodenal cap and increased gastric peristalsis. A cure was rapidly effected by neutralizing the gastric contents with frequent meals and sufficient doses of subcarbonate of bismuth.

It is undoubtedly true that, could gastric ulcers be treated as can ulcers upon the surface of the body, they would rapidly heal; in other words, that the effect of the gastric juice is to prevent healing of the ulcer. In the light, however, of the work of Rosenow and others upon the possibility of bacterial origin of gastric ulceration, it is of the utmost importance that infections, especially chronic focal infections, be borne in mind, and that while the teeth, tonsils, and intestines rank first as offenders and should receive the most painstaking attention, it is necessary also to remember the possibility of chronic processes in the accessory sinuses of the nose, the middle ear and mastoid, the uterine cervix and fallopian tubes, prostate, gall-bladder, and appendix.

I believe it is correct to consider two kinds of causes of gastric and duodenal ulceration, exciting and predisposing—that predisposing factors are usually remote such as constitutional diseases, focal infections, etc.; that exciting or immediate causes may be dietary indiscretions, acute infections, and psychic disturbances leading to the condition which is commonly recognized as nervous indigestion. Without emphasizing the latter unduly, it may be stated that alterations in the physiological functions of the stomach and duodenum due to nervous influences are a very frequent cause of ulceration.

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#### DISCUSSION

**Elbridge J. Best**—The subject of the etiology of gastric and duodenal ulcer as presented by Dr. Ebright is a very timely one. We are daily confronted by typical cases of ulcer, and the first and certainly most important factor is the cause. To control the cause is to control the disease. The literature on etiology of ulcer is very large, and embraces almost every conceivable possibility. The experimentation is most varied and often very ingenious, but fails in proving the cause, in that most measures are direct trauma to the mucous membrane, which cause acute

superficial ulcers that readily heal. One must go deeper and interfere with the blood supply to the mucosa. And here is the crux of the problem. With the normal abundant blood supply, frequent trauma to the gastric lining allows nothing more serious than a transient lesion that gives no symptoms and heals readily. But we have terminal arteries in the stomach, and if we block the artery at its final branching, a cone-shaped area is deprived of nutrition and not only necroses, but becomes readily acted upon by the digesting fluid constantly bathing the mucosa. Result is ulcer which is slow to heal. The evidence seems to point to clumps of bacteria as the most likely cause of arterial blocking. Endarteritis as suggested by Ophuls is a possibility. We see sudden blanching of the skin in vasomotor constitution. Consequently, it is rational to believe a prolonged spasm of vasomotors in the gastric wall would be equally efficacious in shutting off blood from a circumscribed area of stomach. The same blocking probably takes place in other end arteries of the body, but there being no digesting fluid bathing the dead surface, resolution takes place, with no resulting damage as is seen in the digestive tract.

The recurrence of symptoms in ulcer probably means new ulcer formation. This has been shown in several cases seen by me at operation. Therefore, we not only must keep digestion as nearly absent as possible during the healing of a recognized ulcer, but remove the original cause and prevent the recurrence of fresh ulcers.

**The Role of the General Practitioner**—The refinements of specialization have disturbed the comfortable balance of the general medical profession until discontent dominates those who have not added letters of qualification to their medical degree, says the New York State Journal editorially.

The general practitioner is ashamed of his classification and many specialists have added fuel to the flame by talking down to their less limited fellows.

There are more specialties than there are organs, or functions, or secretions, or excretions, or regional subdivisions. Some are almost as limited as indicated by a recent advertisement in a daily newspaper: "Situation wanted by a young man handy with a screwdriver".

While it is possible to establish a minimum fee, and while no one now denies the right to as great a material reward as is decently possible to the expert who has given his life to the perfection of his knowledge and of his technique, there really is a humanitarian side to the question which may ultimately dictate limitations.

A well-rated patient, being referred to a group of specialists, in some manner resembles a bottle of certified milk. The psychiatrist, the ophthalmologist, the otologist, the rhinologist, the laryngologist, the radiologist, the special or general surgeons, each one armed with a Chapin dipper, takes off portions of cream until there is nothing left for the general practitioner but skimmed milk, and while the specialist grows fat, the general practitioner starves through protein indigestion.

Fee splitting furnishes no satisfying balm to the discontent of the general practitioner, probably because the practice involves the elements of deception and therefore is not strictly honest. While the high-minded internist likes the increment which he reasons he has truly earned, he does not enjoy a subterranean method. No internist likes to sell an operation and no operator likes to buy one. Should it not be the role of the internist to manage the whole affair with his cards on the table? Should he not say: "The surgeon's fee will be so much, the internist's fee for assisting or for giving an anesthetic will be so much. The operation is necessary. The decision rests with the patient or with those who are entitled to assume the responsibility." Following such a procedure, there can be no recrimination.

SOME CONCLUSIONS DRAWN FROM  
THE OBSERVATION OF FOUR THOU-  
SAND CASES OF GONORRHEA  
TREATED IN A PUBLIC CLINIC\*

By ALFRED R. ROGERS, M. D., Los Angeles

We have no means of knowing whether or not primitive man was the victim of venereal diseases. Probably he was not. The natural immunity to these infections which is enjoyed by practically all but the human family would indicate that these diseases have come along with the development of what we are pleased to call civilization.

But venereal diseases are not of modern or even medieval origin. We need no better evidence that they existed in Biblical times than the words of the psalmist, who roars: "For my loins are filled with a loathsome disease, and there is no soundness in my flesh. My wounds stink and are corrupt because of my foolishness. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."

This poor chap must have had syphilis or gonorrhea. Probably he had both. He not only recognized the symptoms of his affliction, but he knew from whence they came, for he berates himself unmercifully for his "sin" and his "foolishness."

Furthermore, the name "gonorrhea," which still sticks to one of these scourges, is of ancient origin, born of the ignorance of pathology which our ancestors enjoyed. The name means a "flow of semen" which those ancestors believed the condition to be.

It would be interesting to speculate upon what mode of treatment the psalmist and his brethren used to get relief from gonorrhea. Inasmuch as they knew nothing of the efficacy of potassium permanganate, the silver salts and other gonococccides now in common use, and as neither osteopathy or chiropractic had been "discovered," it is presumed that they adopted methods similar to those of our present-day Christian Science healers, *viz.* : prayed for relief and waited until the body built up an immunity to the infection that in some instances finally arrested the disease. While much can be said in favor of our twentieth century methods of treating gonorrhea, all physicians know how much we modern practitioners of the healing art depend upon this marvelous power of the human organism to resist infection. The progress in the study of the pathology, diagnosis and treatment of syphilis during the last twenty years probably has no parallel in the history of scientific medicine. We have also made some progress in the treatment of gonorrhea, but that progress has been a negative one. Whereas, in syphilis we have learned numerous things that we can do to effect a cure; in gonorrhea our added knowledge is, in general, a knowledge of what we cannot do. The new methods of treating syphilis have generally proved successful. The new drugs and other means tried for the relief of gonorrhea have, in general, proved failures. We are, therefore, in the treatment of gonorrhea just where we were a genera-

tion ago, with the added conviction of the futility of the many methods offered to replace the old ones.

In considering germ infections of mucus surfaces with respect to their treatment, we must admit that we have not as yet found a germicide that will eradicate the invading organism without at the same time doing more injury to the tissues than the organism itself would do if left alone. Applications of argyrol or other similar drug to an inflamed pharynx or conjunctiva has the same effect upon the offending germ that it has upon the gonococcus when injected into the inflamed urethra. It may possibly inhibit its growth, but it does not entirely remove it, as anyone can testify that has used this or similar solutions.

We hear frequently of sudden cures obtained by the use of a new or old drug, and we meet occasionally in our own experience with a gonorrhreal infection that disappears like magic under the same routine treatment that the one hundred cases immediately preceding it have resisted for months. Recognizing that, under any of the accepted modes of treatment, there will occasionally occur a well-defined gonorrhea that will yield quickly and even permanently to the simplest remedies, it can still be maintained without successful contradiction that we have no method by which gonorrhea can be aborted. The acute infection is in a vast majority of instances self-limited, and the greatest success that the writer has met with has been in preventing the many complications and in preventing the acute infection from becoming a chronic one.

It is the custom nowadays to attribute a little that is good and much that is bad to the World War. Among the good things that came with the conflict was a better understanding of venereal disease as a social and industrial problem.

Prior to the war the treatment of gonorrhea by a large majority of physicians was haphazard and perfunctory, and the clinics for venereal disease were maintained mostly for teaching purposes, with but little thought of ridding the world of a blight that was incapacitating thousands every year. Legislation designed to drive from one community, and of course into another, the sources of these infections accomplished nothing, and less than nothing. The problem was treated as a social one instead of as a sanitary one. With the futility of these sumptuary measures, every student of social and domestic affairs is familiar.

During the war, however, the Government realized the urgent necessity of attacking the venereal curse in a more practical way. Municipal, State, and Federal authorities co-operated, with the result that free clinics were established in nearly all large centers of population, all subsidized by the State, Municipal, and Federal governments. These clinics were established in the interest of society rather than in the interest of the individual. Their prime object was to render the infected person, male or female, non-infectious. In other words, the object was to stop the spread of syphilis and gonorrhea.

Instead of deporting infected women to another field where they would continue to spread the disease, the women and men who were found in-

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fected and who were spreading the disease were taken into custody or other control, and treatment was instituted to cure them. In both diseases there is a relative and an absolute cure. When the victim is no longer infectious and consequently no longer a menace to the community, he or she may be said to be relatively cured, though the cure may not be and seldom is absolute. The danger, so far as he is concerned after this end is attained, is to himself and not to those with whom he comes in contact either sexual or other.

To secure these relative cures is the most important function of the public clinic. That the clinics are going on and securing absolute cures in all cases that will continue under observation and treatment adds much to their value as sanitary agencies.

It is difficult to estimate the benefit that has accrued from the instruction that has been given to the attendants at these clinics about the nature of venereal diseases and the dangers that attend them. It would seem that, in spite of all effort, the incidence of venereal infections is on the increase rather than going the other way. Nevertheless, the efforts of the medical profession in clinics and in private practice to obtain early cures, as well as to disseminate information in methods of prevention can only result in good, but cannot stem the wave of immorality in social and domestic relations that has come upon us in the last few years.

That the public, as represented by the indigent and those of moderate means, has profited by the opportunity to attend these public clinics has been amply proved. When the Los Angeles municipal clinic was opened in February, 1917, the attendance for the first year was small, and practically all the cases of gonorrhea presented were those of long standing; men who had gone from one physician to another for months or years in an effort to rid themselves of a chronic posterior urethritis.

My own experience at that time was the same as that of many of my colleagues with whom I talked, namely, it was an unusual thing for any of us to see a venereal case in the acute stage.

At the present time at least 75 per cent of the new cases coming to the clinic are acute infections. In 1917-18 it was extremely unusual for us to see a primary lesion of syphilis. Now we see as many as ten or twelve chances in a week. Undoubtedly this is partly due to the increased incidence of the diseases in our rapidly growing city, but we think that it is also attributable to the general knowledge disseminated through the clinic and other sources, to the effect that the time to begin treatment of venereal disease is immediately after it is contracted. That the chance of a permanent cure is increased ten-fold by this promptness.

In handling this large number of cases of gonorrhea, now close to five thousand, it has been possible to try out most of the new remedies and new methods that have been suggested and urged by sometimes over-enthusiastic physicians and manufacturing chemists. The attempt to improve our results by the use of aniline dyes, combinations of mercury, carbolic acid and other well-known germicides, new silver salts, thermotherapy, vaccines and

serums and what not has been thorough and painstaking. Methods and dosage in accordance with the advice of the manufacturer or discoverer have been followed, and they have been varied in an effort to give them all a fair and impartial trial. There have been times when we have thought that the drug under consideration was giving promise of being a valuable addition to our arsenal of weapons against the gonococcus, but further trial was always disappointing. While I have no desire to condemn any of the new drugs or combinations offered and tested, I most certainly cannot commend them as supplying anything better than those which have stood the test of longer time. After a long and careful and, for my patients, expensive experience with serums and vaccines in acute and chronic gonorrhea, I am convinced that those offered to date are absolutely useless even in so-called gonorrhreal arthritis.

Should a patient present himself with an acute gonorrhea and allow the physician to introduce a tube into his posterior urethra from behind, say, through a suprapubic cystotomy, and should the surgeon pass through this tube and the urethra a continuous stream of plain warm water for two or three days I believe that the gonorrhea could be aborted. I do not suggest this procedure for practical application. The end would hardly justify the severity of the means. But it is surprising and gratifying to note how well patients with acute infections do if they will fairly punish themselves with drinking water. The harmless diuresis caused by taking gallons instead of quarts of plain water in a twenty-four-hour period is, in my opinion, the most potent means that we have of curing this disease. It is possible for a man who does not perspire too freely to take sufficient water to force him to empty his bladder every thirty minutes during the day, and every hour during the night. The urine voided under this forced drinking regime is as clear as water from a hydrant and as non-irritating. Every time he voids, he washes the whole canal free from all pus and debris. There can be no doubt that the presence of pus in the urethra for four or five hours at a time is a fruitful cause of the persistence of the infection and of its extension through whatever route to the deeper and less accessible structures. Alkalies and balsams have no use because they are not necessary and may be harmful to the kidneys. What we strive for is as near a continuous flushing of the infected canal as can be secured by the taking of plain water unmixed with drugs either nauseous or other.

The silver salts of which protargol is our choice because of its comparative cheapness, cleanliness and efficiency probably do but little in the way of sterilization of the urethra. If, however, they are introduced at regular intervals and are held in contact with the inflamed mucosa they do produce a freer flow of leucocytes to the part, and these same leucocytes, furnished by the blood of the individual, are the germicides par excellence for this as for all other infections.

In routine work the patients use protargol in 1 per cent solution as a hand injection, filling the anterior urethra full and retaining it there under

pressure for at least ten minutes at intervals of four hours.

Three times weekly each patient, acute or chronic, irrigates his urethra with hot permanganate solution, 1-3000. If the disease is acute and the canal is excessively tender, this irrigation is confined to gently washing out the anterior portion. As soon, however, as the sensitiveness has subsided sufficiently so that the patient can bear the pressure required to overcome the resistance of the cut-off muscle, the fluid is permitted to pass on into the bladder, and the whole canal is flushed with this solution two or three times at each irrigation. The fear often expressed that this anteroposterior washing will force infectious material into the posterior urethra, and there set up an inflammation in a previously uninfected portion of the canal, does not seem to be well founded as acute prostatitis and epididymitis are of less usual occurrence than under any other form of procedure that we have tried.

While posterior urethritis is a common thing, I do not look upon it as a complication or sequel of gonorrhea, but rather as a natural and almost inevitable accompaniment of the anterior infection. It is just as well to start treating gonorrhea as an anteroposterior disease from the beginning, as our efforts to save the prostatic urethra are practically always futile.

Of the surgical complications and sequelae of gonorrhea and their treatment, this paper will not treat. They have no place in the clinic, where all the patients are ambulatory. We very rarely see epididymitis, and then only if the victim has it on first registering. Our statistics show that it practically never has occurred after treatment has been instituted. Of the nearly five thousand cases handled, not more than three or four have developed this painful complication after beginning his treatment. The posterior urethra is a rich and fruitful field for the urologic surgeon. Cicatrices, contractions, cysts, polypi, and other tumors are of frequent occurrence. Many of these conditions are the result of gonorrhea. The vast majority of them are not. The future welfare and comfort of the patient demand that they be treated and relieved, but such treatment is not, strictly speaking, for gonorrhea.

In the early years of this work we made a practice of massaging the prostate and vesicles of most all the chronic cases. The results were anything but favorable, and we have abandoned this as a routine procedure. Urologists and bacteriologists know how seldom it is that pus containing intracellular diplococci can be obtained from the prostatic or seminal-vesicular fluids of these men, who are forever and a day going about trying to rid themselves of their morning drop or of the shreds that they occasionally find in their urine. After many searches for infective material and after observing that none of these men infect their female partners with gonorrhea, I have arrived at the conclusion that these chronic prostatitis are not, strictly speaking, gonorrhea. They are suffering, in mind mostly, with the results of an old infection which is not transmissible and which if left alone would

in the vast majority of instances never give them any trouble.

If a considerable quantity of real pus can be expressed from the prostate or vesicles and if the patient is distressed with a dragging pain in the region of the prostate or over the pubes and especially if he has an arthritis that cannot be accounted for in any other way, a few efforts to empty these organs of their pathological contents are advisable, but the routine kneading of every prostate that has been the victim of post-gonorrheal infection is as vicious as it is useless.

Material can be expressed from every prostate that has not undergone senile atrophy. If the organ has ever been the subject of an inflammation, this material will be cloudy. It may, and usually does contain a few leucocytes. This material, together with an exudate from the cicatrized urethral mucosa, supplies the morning drop and the shred, but if it contains no gonococci it had better be forgotten. I believe that it is accepted now that the wise syphilologist treats syphilis instead of treating the Wassermann reaction. It would be equally wise to treat gonorrhea instead of a harmless exudate, which may or may not be a sequel to a long-closed chapter of gonorrhea.

We find that our acute cases are under treatment under the routine outlined above for a period averaging a little less than two months. At the end of that time they have been free from purulent urethral discharge for at least two weeks. Smears are negative for diplococci. We call them cured. Many of them are married men, and we have yet to learn of an instance of such dismissal resulting in their infecting their wives. Those who handle many cases of gonorrhea in private practice will know how this end result compares with what they are able to accomplish with private cases that are treated as individuals, rather than en masse as the clinic patients of necessity are. For my own part, I sometimes wish that my private patients would change and go to the clinic.

Of course, there are always the few, both in private and in clinic practice who continue with a more or less rich urethral discharge for months upon months. Some of these are, of course, continually reinfecting themselves, as they are under no surveillance so far as their conduct outside the clinic is concerned. Others are of those whose natural resistance to this type of infection is low or entirely wanting. After all, this capacity of the human body to build up an immunity to this infection is our greatest aid in accomplishing cures. Instances are not wanting of men who, having had gonorrhreal infection numerous times with constantly decreasing severity, will expose themselves to women known to have acute gonorrhea and to come away scott-free having, apparently, established a complete immunity.

To recapitulate:

I would have a patient with acute gonorrhea live and work where drinking water was easily obtainable at all times, day and night. He must never pass a drinking place without taking a glass of water. He must never take a glass of water

without taking three. If he rises to urinate in the night he must drink copiously on each and every occasion. His thirst must not be his guide, but only the necessity of frequently emptying his bladder and thus washing out the inflamed canal.

Protargol as a hand injection and permanganate of potassium as an irrigation accomplish more in the way of local medication than do any or all other drugs that we have tried.

Gonorrhea can be treated in a large clinic, where the methods used are routine and the same for all, just as successfully as they can as individuals. The theory that every case should be treated as an individual in order that he may receive the greatest benefit and the briefest period of treatment, does not seem to be borne out by a comparison with results obtained in clinic and private practice.

Many if not most cases of so-called chronic prostatitis and seminal-vesiculitis, while being gonorrheal in origin, are not gonorrhea *per se* and should not be treated as such.

The use of sounds, as recommended by many authorities to clear up a chronic discharge, has not proven of any benefit unless there is an urethral stricture back of which is an infective area.

Gonorrhea if ever controlled or suppressed must be controlled and suppressed by the medical profession and their co-workers and not by legislators. It can only be handled as a sanitary problem, which it is. The disease itself is not immoral any more than is any other infectious malady. The fact that it is spread very largely through immoral practices is no justification for us looking upon it as different from any other serious disease from which humanity is suffering.

I am strong for the municipal free clinic. May it live long, and prosper. May the time soon come when it will be open night and day to all comers as a prophylactic station.

(Suite 509, Hamburger Building, Los Angeles.)

#### DISCUSSION

**Louis Clive Jacobs, M. D. (Flood Building, San Francisco)**—Any municipal clinic, public clinic, hospital, physician's private clinic or office; in fact, any reputable or ethical place where venereal diseases are treated, should be commended and not condemned. Likewise, the same is true for all the various methods of treating these diseases, excepting those for commercial greed. It is a great blessing to help these unfortunates, and I am of the firm belief that every reputable physician, whether a specialist or otherwise, attempts to do everything within his power to cure these gonorrhoeics.

It is my opinion that the method of choice in treatment is one of efficiency, and that the specialist is the most efficient of the profession to handle these problems. To be efficient, one must be thorough. To be thorough, he must be conversant with the various remedies to combat this evil. He must have a well-prepared knowledge of the gross anatomy and histology of the urinary tract. Likewise, he must be in the close confidence of his patient, whether male or female. His armamentarium of instruments must be complete. He must be prepared to give his individual time and attention to each case. He must bolster up the morale of each patient and be optimistic, because this class of patients is easily discouraged.

In attempting to be thorough, I insist upon treating my patients daily. I treat them myself with

freshly prepared albuminate of silver solution. The reason that some patients do not respond as readily as others to this form of treatment is that the medication does not penetrate to numerous infected follicles deep in the folds of the mucosa. This necessitates endoscopy and the painting of the inflamed follicles with strong silver nitrate solution.

My experience in treating the male case has taught me the importance of keeping all medication out of the posterior urethra during the acute attack; as it has been demonstrated, both clinically and radiographically, that fluid injected posterior to the cut-off muscle ascends into the seminal vesicles through the ejaculatory orifices.

A patient with a Neisserian infection is not cured until he is free from urethral discharge, pus-shreds in the urine, or expressed pus from the prostate or seminal vesicles.

Many chronic cases have been successfully treated by fulgurating infected follicles of the urethra, and the utricle of the verumontanum.

I thoroughly agree with Rogers in the advisability of having these patients drink large quantities of water, though I have never forced fluids to such a heroic extent as he has.

In those cases having a thin, limpid discharge without definite types of organisms present, I have had good results by utilizing a hand injection of a weak solution of formo-zincol.

Rogers deserves to be highly commended for the excellent manner in which he has handled these four thousand cases, and I am sure that the favorable results reported are due to the efficiency of his methods.

**Alfred R. Rogers (closing)**—I heartily agree with Dr. Jacobs when he says that all honest efforts to eradicate gonorrhea should be commended and not condemned. Certainly it is not my intention to condemn any such. In our experience in this clinic we have found certain methods to be efficient and others to be, in our hands, disappointing. I feel that the number of cases handled is sufficiently large upon which to base conclusions. The doctor is absolutely right in his remarks about efficiency. No one ever will or ever can accomplish anything of value in this work except the well-trained, well-equipped and conscientious specialist. The sooner we convince these men and women that the Chinese herb doctor and his ilk are inefficient the sooner we will accomplish the desired end which is, to lessen if not entirely to eradicate the venereal curse.

I thank Jacobs for suggesting formo-zincol in stubborn chronic, limpid discharges. I have had fair success with oxycyanide of mercury and weak silver nitrate irrigations.

My object in presenting this paper is to demonstrate the success of the public clinic in rendering gonorrhea non-infectious, and thus to accomplish a social as well as a sanitary benefit to the community.

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**Tri-State District Medical Association Meeting**  
This association, comprising the entire states of Iowa, Illinois, Wisconsin and Minnesota and districts of surrounding states, will hold its annual assembly at Des Moines, Iowa, October 29, 30 and 31 and November 1. Physicians of California (who are in good standing in their State society) are most cordially invited to attend and take part in the program. This association is a purely post-graduate organization. The entire time of the annual assembly is taken up with scientific study. The program committee is made up of Walter L. Biering, E. Starr Judd, Dean Lewis, John L. Yates. The committee on medical advancement and research are Frank Billings, Henry Christian, Lewis A. Connor, George W. Crile, John B. Deaver, John M. T. Finney, Campbell P. Howard, Dean Lewis, Charles H. Macey, John L. Yates. Headquarters will be at Fort Des Moines Hotel.

## NOTES ON THE X-RAY TREATMENT OF WHOOPING-COUGH \*

By JOHN J. KINGSTON, M. D., and  
HAROLD K. FABER, M. D.

(From the Division of Pediatrics, Stanford University  
Medical School, San Francisco.)

In a recent communication Bowditch and Leonard reported the favorable results obtained following the use of the X-ray in pertussis. They gave three to four treatments at intervals of two to three days, regulating the dosage according to the age of the patient, and in a small percentage of twenty-six cases a prompt cure was obtained—70 per cent were improved, while from 10 to 15 per cent were not relieved.

In the past few months all the cases of pertussis coming to the Stanford Children's Clinic were referred to the X-ray department. They were given from one to three exposures, at weekly intervals, of one-fourth the erythema dose—20 milliampere minutes, target skin, distance 12 inches, 9 3/4-inch spark gap 1/4 mm. copper filter, over a large area of the chest, both front and back. Only undoubted cases of pertussis were included in this series, the diagnosis being made on both the history and character of the cough while under observation. In many of the cases white and differential blood counts were also obtained. Twenty-four patients were given this treatment and observed over a long enough period to allow us to draw some conclusions regarding its efficacy. The children ranged in age from seven months to thirteen years and were in all stages of the disease, the duration of the symptoms varying from three days to one month when treatment was instituted.

Four of the cases showed remarkable improvement after the initial treatment, while two of the children were not relieved even after three exposures. Ten of the remainder were markedly better after two treatments, the vomiting and, in most instances, the typical paroxysms stopping. The other eight showed a more gradual improvement, but were not considered cured after the last treatment. Perhaps the most constant effect of X-ray was the prompt cessation of vomiting, which occurred even in those cases where the whoop did not abate. Naturally the interpretation of the results is open to the criticism that the technic of the treatment required three weeks for completion, and the normal convalescence may have been overlooked in ascribing the improvement to the X-ray exposures. It is our belief, however, that the severity and length of the disease was not as marked in these cases as in others we have treated with vaccine and the usual sedatives and anti-spasmodics. Many of the patients have escaped the usual residual cough, and in none has it been troublesome.

We will not attempt, from this limited study, to draw any conclusions as to how the beneficial effects are obtained or why the results are not uniform. With our present knowledge we are unable to foretell which patient will be benefited. Apparently neither the age, blood count, duration, or

clinical severity of the disease are criteria as to its possible course under treatment.

A rough analysis of our figures shows that, in the whole group before treatment, there were 445-489 paroxysms of whooping daily; after one treatment the number was reduced to 218-245, or 49-50 per cent of the previous figure; after two treatments, to 65-74, or 15 per cent of the original; and after three treatments, to 9-10, or about 2 per cent of the original number. Whooping ceased in five cases after one treatment; in five cases, after two treatments; in seven cases, after three treatments; and in one case after four treatments. Three patients were still whooping after two treatments, and three, after three treatments, these being cases which failed to report again. The very sharp immediate reduction in frequency to half after one treatment would seem to indicate a definite response to the X-ray.

While the exact value, and limitations of the method demand further study, we feel that the definite improvement secured in many patients and the prompt and almost complete relief obtained in a few, constitute a positive gain in the treatment of a disease which is very rarely susceptible by other methods of more than temporary symptomatic relief. The fact that complete failure is met with in a certain proportion of cases should be explained in advance to the parents, but does not alter our belief that the X-ray treatment is at present the most promising therapeutic measure which we possess for pertussis. No ill effects from radiation have been encountered.

We gratefully acknowledge the co-operation of Drs. W. E. Chamberlain and Robert Newell of the X-ray department, without which the present study could not have been made.

Case No. 1—Age, 10 months; duration of disease, 1 month; W. B. C., 19,350; per cent lymphocytes, 20; number of paroxysms in 24 hours, 10-13; number of X-ray treatments, 2. After first treatment, 4-5 paroxysms daily; vomited with each spell; after second treatment no whooping or vomiting; cough 2-3 x daily; cured 3 weeks after first treatment.

Case No. 2—Age, 2 years; duration of disease, 2 weeks; number of paroxysms in 24 hours, 20-24; number of X-ray treatments, 3. Had 4 vaccine injections before X-ray treatment; seemed worse after first treatment; marked improvement after second; 2 paroxysms daily; no vomiting; did not report after third.

Case No. 3—Age, 5 1/2 years; duration of disease, 3 weeks; W. B. C., 24,600; per cent lymphocytes, 57; number of paroxysms in 24 hours, 10-12; number of X-ray treatments, 1. Much better after first treatment; no vomiting or whoop; slight coughing spells 4-5 x daily; total duration less than 3 weeks.

Case No. 4—Age, 11 years; duration of disease, 5 days; W. B. C., 11,650; per cent lymphocytes, 33; number of paroxysms in 24 hours, 6; number of X-ray treatments, 3. Improved immediately after first treatment; no cough for 5 days after first treatment; then slight cough, but no paroxysms or vomiting; 3 weeks later no paroxysms or vomiting; coughing only once a day.

Case No. 5—Age, 1 year; duration of disease, 1 month; number of paroxysms in 24 hours, 4; number of X-ray treatments, 1. Immediate improvement after treatment; no vomiting or paroxysms; reported 3 weeks later, only one slight coughing spell in 24 hours.

Case No. 6—Age, 7 months; duration of disease,

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2 weeks; number of paroxysms in 24 hours; 40-48; number of X-ray treatments, 2. After first treatment no paroxysms; vomiting 0-2; slight cough 4 x daily; after second treatment marked improvement; no cough or vomiting.

Case No. 7—Age, 2½ years; duration of disease, 3 weeks; W. B. C., 40,000; per cent lymphocytes, 72; number of paroxysms in 24 hours, 48; number of X-ray treatments, 3. No improvement till second treatment, then 9 paroxysms daily; vomiting 0-2; nose-bleed after third; seems worse after this treatment; 5 weeks after first treatment still coughing 8 x day.

Case No. 8—Age, 4 years; duration of disease, 2 weeks; number of paroxysms in 24 hours, 16; number of X-ray treatments, 2. No whoop after first treatment, but coughs 10-12 x daily; frequent vomiting; marked improvement after second treatment; no vomiting, practically no cough.

Case No. 9—Age, 2 years; duration of disease, 1 month; number of paroxysms in 24 hours, 24; number of X-ray treatments, 2. Better after first treatment; no vomiting; 8 paroxysms daily, much better after second treatment; practically no cough.

Case No. 10—Age, 4 years; duration of disease, 3 weeks; W. B. C., 13,400; per cent lymphocytes, 65; number of paroxysms in 24 hours, 24-30; number of X-ray treatments, 2. No vomiting after first treatment; 7-8 paroxysms daily; after second only 3 paroxysms daily.

Case No. 11—Age, 3½ years; duration of disease, 10 days; W. B. C., 10,200; per cent lymphocytes, 43; number of paroxysms in 24 hours, 24; number of X-ray treatments, 3. Slight improvement after first treatment; after second treatment no vomiting; paroxysms 3 x daily.

Case No. 12—Age, 5½ years; duration of disease, 1 month; W. B. C., 17,200; per cent lymphocytes, 49; number of paroxysms in 24 hours, 48; number of X-ray treatments, 2. Marked improvement after first treatment; vomiting 1-2; paroxysms 3-4; after second treatment no vomiting; paroxysms 3; cured after third.

Case No. 13—Age, 2 years; duration of disease, 1 week; W. B. C., 10,310; per cent lymphocytes, 71; number of paroxysms in 24 hours, 15-16; number of X-ray treatments, 3. No improvement after first treatment; after second, 8-10 paroxysms daily; condition same after third.

Case No. 14—Age, 4 years; duration of disease, 3 weeks; W. B. C., 9300; per cent lymphocytes, 67; number of paroxysms in 24 hours, 6-8; number of X-ray treatments, 3. No improvement after first treatment; after second, 1-2 paroxysms daily; cured after third.

Case No. 15—Age, 4 years; duration of disease, 3 days; W. B. C., 8800; per cent lymphocytes, 53; number of paroxysms in 24 hours, 5; number of X-ray treatments, 3. After first treatment, 5 paroxysms; no vomiting; after second treatment, 2 paroxysms; after third, no paroxysms; slight residual cough.

Case No. 16—Age, 13 years; duration of disease, 4 days; W. B. C., 15,410; per cent lymphocytes, 38; number of paroxysms in 24 hours, 21-26; number of X-ray treatments, 3. No improvement after first; after second, 6-8 paroxysms daily; no vomiting; cured after third.

Case No. 17—Age, 6 years; duration of disease, 6 weeks; number of paroxysms in 24 hours, 6-8; number of X-ray treatments, 3. Marked improvement after first; vomiting stopped; 4-5 paroxysms; after second, 3 paroxysms; cured after third.

Case No. 18—Age, 2 years; duration of disease,

2 weeks; W. B. C., 20,000; per cent lymphocytes, 57; number of paroxysms in 24 hours, 12-20; number of X-ray treatments, 3. Improved after first; no vomiting; paroxysms 8 daily, not as severe; after second, 2 paroxysms daily; none after third treatment.

Case No. 19—Age, 5 months; duration of disease, 2 weeks; number of paroxysms in 24 hours, 8-10; number of X-ray treatments, 3. No improvement after first treatment; vomiting 2 x after second; paroxysms 8-10; vomiting and paroxysms stopped after third.

Case No. 20—Age, 3½ years; duration of disease, 3 weeks; number of paroxysms in 24 hours, 20+; number of X-ray treatments, 3. Marked improvement after first; no vomiting; 7 paroxysms daily; no paroxysms of vomiting after second treatment.

Case No. 21—Age, 5 years; duration of disease, 5 weeks; number of paroxysms in 24 hours, 5; number of X-ray treatments, 3. 1-2 paroxysms after first treatment; started vomiting supper after first treatment; no vomiting after second; 1 paroxysm daily; cured after third.

Case No. 22—Age, 1½ years; duration of disease, 3 weeks; number of paroxysms in 24 hours 40; number of X-ray treatments, 3. Improved after first; 8-10 paroxysms; occasional vomiting; did not return after third.

Case No. 23—Age, 9 years; duration of disease, 3 weeks; W. B. C., 7950; per cent lymphocytes, 40; number of paroxysms in 24 hours, 24; number of X-ray treatments, 2. Improved after first; no vomiting; 7-9 paroxysms daily; cured after second treatment.

Case No. 24—Age, 5 years; duration of disease, 1 week; W. B. C., 10,000; per cent lymphocytes, 55; number of paroxysms in 24 hours, 8-10; number of X-ray treatments, 4. No improvement after first; X-ray; started vomiting after second; paroxysms 10; after third no vomiting; 1-2 paroxysms; only slight residual cough after fourth.

#### DISCUSSION

Dr. Clifford D. Sweet (440 Seventeenth Street, Oakland)—Our thanks are due Drs. Kingston and Faber for presenting their results to us. As they have pointed out, their series is too small to give these results their final value. Nevertheless, this method of treating whooping-cough is sufficiently successful to make further study of it desirable by all who have facilities available. The results of these further studies we will all await anxiously, hoping that a valuable method of relief for our patients has been found.

**Reforming Fashionable**—Have you ever stopped to think that everybody is a member of some society or other whose object is to reform somebody or other? According to a recent report there are over 1500 national "anti societies" in the United States, all working excitedly to prevent somebody from doing something they are supposed to want to do.

Reforming is very fashionable. Everybody is doing it. The rich are busy reforming the poor and the poor are passionately pleading with the rich to mend their ways. A man may violate the Volstead Act daily and gaily, and yet hold important office in a society the object of which is to enforce some other law. There are hundreds of organizations, employing thousands of people, campaigning loudly every day in the year for the enactment of some law or other. No sooner do we get the law enacted than we are importuned to organize to enforce it, and the day after the next we wake up to find that our neighbors have organized to repeal it!—Pictorial Review, June, 1923.

## SYPHILIS OF THE BLADDER \*

By ANDERS PETERSON, Los Angeles

In a careful review of the literature, Thompson found only eighty-four cases of syphilis of the bladder, and of these only fifty-eight were accepted as authentic.

Prior to the discovery of the Wassermann test and the use of the cystoscope, many cases of bladder lues undoubtedly were unrecognized, so that it is fair to assume that syphilis of the bladder occurs more frequently than the few reported cases indicate.

I wish to report two cases of syphilis of the bladder.

The first patient was a druggist, 45 years of age, whose previous history showed a gonorrhoeal infection nineteen years ago, but he denied any knowledge of a chance. The main complaint was great bladder irritability and marked frequency of urination for the past eight months. Two weeks ago his symptoms became distinctly worse; he developed severe pains over the abdomen and passed clots of blood in the urine.

A cystoscopic examination, May 2, 1922, showed a small, irritable, diffusely inflamed bladder containing about three ounces of cloudy and foul-smelling urine.

On the right bladder wall, immediately above the right meatus, an edematous area, the size of a dollar, was seen, covered with calcareous deposits. Indigo carmine, given intravenously, appeared in strong color upon the left side within five minutes, and a strong blue could be seen coming from just below the incrustations upon the right side at the same time. The left ureter was catheterized, but I was unable to pass a catheter upon the right side.

Phenolsulphonephthalein appeared in five minutes on the left side with an output of 8 per cent in fifteen minutes. The bladder specimen showed 12 per cent of the dye.

Microscopic examination of the specimen from the left side was negative for pus. X-ray of the kidneys, ureters and bladder showed an irregular shadow over the right bladder area. The kidneys were negative for stone.

At the completion of this examination I was uncertain regarding the lesion in the bladder and debated in my mind if this could be a malignant tumor, tuberculosis, or a phosphatic cystitis. I confess that a luetic lesion was not at once considered. Following the cystoscopic examination, considerable blood was present in the urine, and three days following the examination the patient was unable to void on account of clots filling the bladder. Attempts at catheterization were unsuccessful. It became necessary to do a suprapubic cystotomy for drainage. By this time the laboratory work had been completed, which failed to demonstrate the tubercle bacilli in the urine, but showed a four-plus Wassermann reaction. At operation the bladder was found to be very small and firmly fixed deep in the pelvis, and it was with considerable difficulty that the dissection was made to place a tube in the bladder. Exploration of the bladder showed a large number of fragile

calcareous deposits over an ulcer in its right wall. These deposits were removed, but nothing further attempted to the ulcer itself. He was given small doses of neo salvarsan and mercurial rubs. The urine became free from blood and the fistula closed, so that on June 15 he went to his home and received anti-syphilitic treatment from his physician.

The suprapubic fistula reopened from time to time. The patient did not gain weight and was not able to go back to his work. He developed a fever and complained of pain in the left side of the chest. His physician made a diagnosis of active pulmonary tuberculosis. The man died August 15, 1922. No autopsy was held. During the entire time he tolerated anti-syphilitic remedies very badly, and although the urine became fairly clear, the bladder capacity remained small and the suprapubic wound opened from time to time.

The second patient was a woman 29 years of age, who consulted her physician on account of pain of two months' duration over the lower right abdomen. A careful physical examination, including an X-ray study of the gastro-intestinal tract, revealed no abnormalities, except a moderate amount of fluid in the abdomen and a few red blood cells in the urine. The X-ray showed an indefinite shadow in the right kidney area. The patient was referred to me because of the shadow over the right kidney, and on account of the presence of a few red blood cells in the urine. Cystoscopic examination showed upon the right wall of the bladder two ulcerated areas, from 6 to 8 mm. in diameter; one near, and the other about 2 cm. above the right meatus. The remaining bladder mucosa appeared normal. The left meatus was normal and the catheter passed easily up the ureter. Microscopic examination of the specimen collected from the left kidney was negative. No urine could be seen coming from the right side, nor could a catheter be passed up the ureter. Phenolsulphonephthalein appeared in five minutes with an output of 17 per cent upon the left side in fifteen minutes. The transvesical collection from the right side showed 9 per cent of phthalein. An X-ray of the kidneys, ureters and bladder was negative, and a pyelogram on the left side showed a normal kidney outline.

Again I could not decide from the cystoscopic picture positively the nature of the lesions in the bladder. The urine was examined for tubercle bacilli and none found. A blood Wassermann was reported as four-plus.

Considering the presence of fluid in the abdomen, the depressed function of the right kidney, the bladder picture, and the positive Wassermann test, the conclusion was reached that this patient had a syphilitic involvement of the liver, right kidney and bladder. She was placed upon anti-syphilitic treatment and had quite a severe reaction following two injections of salvarsan. Twenty-five intravenous injections of mercury were given. The patient was last seen October 10, 1922, reporting that she was feeling well. No evidence of ascites could be demonstrated.

The pathology of syphilis of the bladder has been studied post-mortem, through suprapubic cys-

\*Presented to the Section on Urology at the Fifty-second Annual Session of the California Medical Association.

totomy and by means of the cystoscope. Thompson states that in the early course of the disease there is more or less congestion of the bladder mucosa, which may be likened to the diffuse eruption sometimes seen in the mouth and on the pharynx. Or there may be a distinct papular eruption, either with or without erosion or ulceration. The most frequent site of these lesions is around the ureteral orifices, usually around only one, but other portions of the bladder wall may be attacked. In the later stages of the disease the most frequent type of lesion is the ulcerating gumma. These ulcers are round, oval or irregular, and vary from one to two millimeters to several centimeters in diameter. They are usually of a grayish-yellow color with infiltrated edges and are sometimes covered by crustations. In some cases definite bleeding from the ulcers has been observed through the cystoscope and sometimes a blood clot can be seen attached to the ulcer.

Perforation and formation of a vesico-peritoneal fistula or a vesico-rectal fistula may occur. Sometimes there is only tumefaction without ulceration, the tumors varying in size from a small hazel nut to a walnut or larger. Papillomatous tumors have been observed, and even operated upon, on the assumption that they were benign papillomata. The microscopic picture of lesions of syphilis of the bladder has not been studied very thoroughly. There is no doubt that it is the same as found in similar lesions elsewhere and, briefly, consists of an infiltration of lymphocytes and plasma cells, proliferation of the fixed cells, and more or less endarteritis. The Wassermann test has proved very reliable in vesical lesions, and can be expected to be found positive in practically 100 per cent of all cases of bladder syphilis.

When ulcers, papillomas and solid tumors of the bladder are found upon cystoscopic examination, one cannot be positive regarding the nature of the lesions from the cystoscopic picture alone. A Wassermann test should, therefore, be done whenever the above mentioned lesions are found. Should the test show a positive reaction, a course of specific treatment is indicated prior to any surgical intervention.

#### DISCUSSION

**Miley B. Wesson, M. D. (Flood Building, San Francisco)**—This paper is most interesting and offers additional evidence for the necessity of routine Wassermann tests in all cases of ulcers and tumors. Judging from the literature, syphilis of the bladder is very rare, but if every syphilitic was cystoscoped during the exanthematous stage it would undoubtedly be found that the mucous membrane of the bladder was also involved, even though there were no vesical symptoms. The bladder lesions vary from small mucous patches or ulcerated papules with elevated borders to tumors simulating a median lobe hypertrophy of the prostate. The most confusing tumors are the syphilitic papillomas, which can not be cystoscopically distinguished from benign papillomas. The first laboratory diagnosis of syphilis of the bladder was made only six years ago; some half-inch papillomas that had been removed suprapubically were reported as syphilitic condyloma, and at the same time the blood Wassermann was found to be strongly positive. The patient gave a history of

a chancre two years before, and two blood tests, taken in the Navy, had been negative.

There is nothing characteristic as to the symptoms or cystoscopic picture in bladder syphilis. The diagnosis rests upon the history and the presence or absence of other manifestations of syphilis, including the Wassermann test. All cases of hematuria and pollakiuria should be looked upon with suspicion until syphilis is ruled out. Dr. Peterson's paper emphasizes Sir William Osler's statement that the man who knew syphilis in all of its manifestations knew all of medicine.

(412 Brockman Building.)

**Some Recent Facts on Blood Pressure**—Under this title the Metropolitan Life Insurance Company says: "Facts which have recently come to hand through a joint study by the Life Extension Institute and the Metropolitan Life Insurance Company indicate that we may have to revise our ideas on the causes of abnormal blood pressure. Heretofore, the literature has emphasized the importance of such items as overweight, high protein diet, the excessive use of tobacco, the existence of focal infections in the tonsils and in the dental structures. All of these, either singly or in combination, have been associated with the existence of abnormal blood pressures, either high or low. From the data gathered in the examination of nearly 17,000 policy-holders of the Metropolitan Life Insurance Company by the Life Extension Institute in 1921, it appears that of the several factors above mentioned, only over-weight is consistently accompanied by a markedly higher percentage of high blood pressure. The other conditions are not clear-cut causative factors.

"Among white males who partake of too high protein diet, blood pressures 20 m.m. Hg. and more, above the average for age were noted in 7.3 per cent of the cases, and among all other persons examined and used as a control, that is, persons who did not partake of too high protein diets, the proportion of hypertension cases was 7.4 per cent! High blood pressure was recorded in 6.6 per cent of the cases where 'excessive use of tobacco' was observed, as compared with 7.8 per cent among those not using tobacco to excess. Suspected focal infection in the tonsils showed 7.4 per cent of the cases with hypertension, as compared with 7.3 per cent among white males showing no enlarged septic or buried tonsils. There were 6904 of these policy-holders who had 'heavy dentistry,' that is to say, they had a large amount of bridgework, crowns, caps and other artificial dentures under which so many blind abscesses, areas of infection, etc., are found on X-ray. Presumably, these cases were all in the class which has received so much attention from dental pathologists recently. Yet, these policy-holders showed no more important departures in arterial tension than did the group which had no 'heavy dentistry.'

"The findings on low blood pressure are of interest also. Over-weights, high-protein feeders and persons with enlarged, septic or buried tonsils, had lower percentages of low blood pressure than did the control groups not showing these impairments. Low blood pressure was only slightly, perhaps insignificantly, pronounced among excessive users of tobacco and among persons having suspected dental infection.

"It is not entirely clear just what these figures mean in the light of the usually accepted ideas on causes of abnormal arterial tension. The figures simply suggest that certain etiologic factors described in general terms by the medical profession and familiar as such to the lay public, have no gross causal relationship either to high or low blood pressure."

**FATAL AIR EMBOLISM AFTER PUNCTURE MAXILLARY ANTRUM—AUTOPSY**

By J. A. BACHER, M. D.

(From the Department of Surgery, Stanford University Medical School.)

X-ray of the maxillary antrum, followed by lavage through a straight trocar of two millimeters, outside diameter, placed through the inferior meatal wall, has for several years been our routine in the examination of suspected chronic sinusitis cases. We have done this several thousand times in the past six years, 1191 times in the past two and a half years. We have very seldom blown air through the trocar before liquid, but we have not absolutely forbidden it. We have considered this an easy and safe procedure, and one of the first things to allow our internes to actually do after they have completed the technique of examinations.

A case of sudden death, shown by autopsy to have been caused by air embolism, has caused us to modify our technique somewhat.

**Case Report**—Male, age 40. Catarrh and impairment of nasal breathing for years; acute rhinitis five or six times a year; much anterior nasal discharge; tonsilitis once a year; hearing impaired in both ears, four years; much tinnitus; no pain or discharge in ears. Examination showed the nasal septum irregular on the right, turbinates enlarged, much mucopurulent discharge, space poor; left naris about the same; tonsils moderate size, wide crypts; purulent debris in crypts; nasopharynx clear; vocal cords and arytenoids, normal motility and appearance; both membranae tympani retracted, fibrous, fair light reflexes; watch heard in right ear 12/36, in left 18/36. X-ray showed thickened lining membrane both maxillary antra. Straight trocar placed through right inferior meatal wall into antrum by interne. Air forced through trocar. Collapse.

The patient was stiffened out in the examination chair when I reached him. The trocar had been withdrawn. My first thought was epilepsy; but when he was at once laid out on the floor, we noted that, though his lower limbs were spastic, the upper ones, neck and jaws, were relaxed, pupils dilated, pulse not perceptible. Carried across the room to treatment table. Adrenalin, caffeine sodium benzoate and strychnine sulphate hypodermically at intervals. Heart massaged for fifteen minutes. Artificial respiration for half an hour. No heart beat with stethoscope.

**Autopsy**—Autopsy by Dr. William Ophüls showed death to have been due to air embolism, the right ventricle and conus of pulmonary artery being filled with a foam of air and blood.

Sir St. Clair Thompson, at the meeting of the Section of Laryngology, Royal Society of Medicine, March 2, 1923, said he had been taught to blow air through the cannula, and he had never seen an accident from the procedure. He said that it would be important to settle whether air really was responsible.

Two cases have been reported where autopsy has shown death to have been due to air embolism, one by Bowen in 1913, and one by Neugebauer in 1917. Both of these cases are cited by Grove in 1922 in his detailed account of mishaps in puncture of the antrum.

We now force the trocar, without any rubber attachment, through the inferior meatal wall, apply

suction to the trocar with a glass syringe to be sure it is not in a vein, attach a piece of rubber tubing which has a metal modifier that fits the trocar tied to it, and force the liquid through with a metal syringe. No air should be blown through before the liquid. After using the fluid, a couple of syringefuls of air are used to partially clear the antrum of fluid.

This makes a safe procedure and we shall continue to use it in our work.

**Responsibilities of the Press**—The gullibility of man is limited only by the scope of his imagination, although it is in some measure modified by the degree of intelligence which he possesses. "In some measure" we say advisedly, for we know that in fields which lie outside his exact knowledge even the most intelligent of men will often hold reason in abeyance and believe that which he wishes to believe, or that which appeals to his fancy, his imagination, or that innate love of the mysterious which lies in all of us. Thus we have the examples of Bishop Berkeley exploiting his tar water, George Washington (so it is said) purchasing from Elisha Perkins a pair of metallic tractors for family use, and in our own more enlightened day countless numbers seeking health through the many irregular methods that we are all aware of.

As each extravagant claim and each unwarranted belief is promulgated, however, there is always that large number of reasoning individuals who, either through natural wisdom or exact knowledge, know that these claims and beliefs are unsubstantial and faulty. It is through these persons that the acceptance or rejection of unusual ideas should come, and it is by them that the minds of the people should be directed into the proper channels when occasions of doubt, or bewilderment, or spurious belief are likely to arise.

It is inconceivable to believe that our daily press should not have men of this caliber intimately concerned with the directing of its policies; it is also inconceivable to believe that our press, for the sake of presenting the spectacular to its readers, or for more baldly commercial reasons, should print as news or advertisement statements, in the guise of fact, which may be detrimental to the public interest. Inconceivable or otherwise, we must acknowledge that this is done.

Editorial policies and news and advertisements we find are conveniently separate, for the advertising pages of a newspaper which, editorially, professes great interest in the public welfare, will flaunt proprietary gland preparations before our eyes, and in the news section we will find considerable concern exercised lest Lord Carnarvon's insect bite might be the imperial punishment of a long dead Pharaoh, although, in another section of the same issue, we may read a denial of this possibility. "Let not thy right hand know what thy left hand doeth" might almost be adopted as a motto by many publications.

There is great power for harm in such statements and advertisements, and we have seen too much of this loose thinking and unscrupulous advertising lately. The newspaper is the most powerful instrument in the world for shaping public opinion, and its responsibilities are too great to be taken lightly. Quotations concerning the power of the pen are hackneyed, but it is very near the truth to say that high-minded and public-conscienced editorial staffs are more valuable than college faculties.—Editorial, Boston Medical and Surgical Journal, April 19, 1923.

## EDITORIALS

### INDEMNITY DEFENSE FUND COVERAGE AND PROTECTION STOPS NOVEMBER 30, 1923

The Council, at an adjourned meeting held at San Francisco, September 22, 1923, unanimously adopted the following preamble and resolutions:

Whereas, The House of Delegates of the California Medical Association (formerly called the Medical Society of the State of California) at its last regular meeting held at San Francisco, Cal., June 23, 1923, by resolution unanimously adopted, resolved that the Indemnity Defense Fund be discontinued as a society undertaking at such time and upon such notice as the Council should deem necessary for the best protection of its members; now therefore, pursuant thereto and to the authority vested in the Council by the administration regulations and coverage rules of said Indemnity Defense Fund, it is hereby unanimously

Resolved, That the benefit, protection, coverage and indemnity of the Indemnity Defense Fund shall not nor shall any part thereof extend to or cover any malpractice claim or case or suit or judgment, as defined by said regulations and rules, against any member of said fund, arising out of professional services or acts done by or on behalf of such member on or after December 1, 1923; and no member of said fund shall have or be entitled to or receive any benefit or protection or coverage or indemnity from said fund or any part thereof to any such claim or case or suit or judgment against him so arising out of professional services rendered or acts done by him or on his behalf on or after December 1, 1923; and said administration regulations and coverage rules are hereby amended accordingly; and be it further hereby

Resolved, That a copy of this resolution be forthwith sent to the trustees of the Indemnity Defense Fund and to each member of said fund at his address as shown by the Association's books and records by registered mail; and that the secretary of the Association in such registered letter direct the attention of each member to the necessity of securing a physician's indemnity policy with some insurance carrier issued to him and effective not later than November 30, 1923; and that this resolution be published in the November issue of the Journal, and, if possible, the October issue thereof.

### THE ILLNESS OF THE EDITOR OF THE JOURNAL

Early in September Dr. Musgrave was taken sick with lobar pneumonia, and from the very first he was in an extremely critical condition. The base of the left lung and later the greater portion of the right lung was involved in the inflammatory process.

Due to his overworked condition and especially to the exhausting activities incident to the supervision of the recent meeting of the A. M. A., Dr. Musgrave was in a state of lowered resistance. His heart fibrillated badly and the toxemia was extreme. As a complication he developed a right-

sided empyema. This was drained and a stormy period intervened, with a bad prognosis.

At present writing—three weeks from the inception of his malady—the situation is clearing and there is every reason to believe that he will recover. Necessarily, however, he must be exempt from the more arduous duties of his office for some time to come.

### AN INNOVATION IN MEDICAL LITERATURE

With this issue, the CALIFORNIA STATE JOURNAL OF MEDICINE introduces an experimental innovation, so far as we know, in medical literature: A number of articles are discussed by men interested in the field covered by the authors. This discussion is not the usual extemporaneous remarks of a man who has heard the paper read at a medical meeting, but is the mature, thoughtfully prepared comments of a man who has had the manuscript in front of him, has studied it and prepared what he has to say without haste.

The first step in this movement was taken recently, and the editor of the Journal is much pleased at the spirit of co-operation and splendid letters of commendation of the movement already received. Frankly, we do not know what the end result of this movement will be. In any event, we are going to give it a fair trial.

Up to the present time these manuscripts have been sent to different members in different parts of the state without any very definite system. If the movement meets the endorsement of our readers and is to fulfill the mission we hope that it may fulfill, it must be supported by a large number of contributors representing general practitioners and all the various legitimate specialists in the field of medicine. To that end, the comment and suggestion of members of the State Association is invited, not only as to approval or disapproval of the continuation of the policy, but more particularly and specifically we would like to have interested members send their names and addresses and the field in which they are interested to the Journal, so that they may be included among those who will be invited to discuss papers from time to time.

### ANOTHER HOSPITAL "SURVEY"

The daily press reports that, at the request of some of those interested in Community Chest promotion, another "survey" of the health and hospital situation in San Francisco was made recently by Haven Emerson of New York. We do not know who is paying for this last "survey," but we do know that all the facts of any practical value brought out by the "survey" and many more of greater value are already matters of record and were and are available to responsible Community Chest authorities without price.

Some of the statements made by the surveyor are not facts, and some of his recommendations looking toward the socialization of medicine deserve notice.

In his talk to hospital trustees and superintendents, Emerson criticized San Francisco for not having five hospital beds per thousand of population. He apparently did not take the trouble to read

published reports, to say nothing of examining unpublished records of the medical profession, or he would have found that we already have more than the five hospital beds per thousand of population.

Emerson's criticism to the effect that the hospitals were using "faulty" business methods in reporting to the Community Chest was resented by some of those present. Methods of hospital accounting are not what they should be anywhere. There is no one system universally employed, and certainly the obsolete methods indicated in the questionnaires sent out in this "survey" should not and will not be adopted by progressive hospitals of California.

Most of the representative hospitals of the state have been gradually working toward a uniform method of accounting for several years. This subject is discussed every year at the hospital conference held under the auspices of the League for the Conservation of Public Health, and the subject receives constant attention from the Hospital Betterment Bureau of the League. The certificate of merit was awarded the League for the Conservation of Public Health for its scientific exhibit at the recent A. M. A. Convention. Among the features of that exhibit was a model hospital accounting system, which is being followed, or constantly more closely approximated by hospitals all over California. The hospital betterment work of the League has had the repeated endorsement of the hospitals of the state in annual conference. It has the endorsement of the California Medical Association, and hospital accounting forms one of the essential factors of its program.

Some of the hospitals whose accounting methods are reported to have been criticized by someone in the Community Chest are following the approved program for the state so successfully that they are used for training stations for students of hospital accounting.

A most amazing recommendation attributed to Emerson has been brought to our attention by an avalanche of letters, telephone calls, and personal visits from hospital people. He is reported to have recommended that the San Francisco County Hospital be opened to "middle class" pay patients.

This, of course, is a form of "State Medicine" or "socialized medicine" that will require more than a "survey" to impose upon the community. Social Health Insurance was once rejected by the people of California at the polls, and if it comes up again the same forces will be prepared to meet it.

A large group of members of the San Francisco County Medical Society gladly give freely of their time in free service to the patients of this great city hospital. They do this because these patients are unable to meet the expenses of sickness. The hospital also furnishes care free to citizens who are unable to pay; this at an unknown cost in taxes to the people of the county. The cost is unknown because of an incomplete and inadequate accounting system of the kind Emerson apparently would like to see in other hospitals. With an adequate accounting system it will be found that the cost to those who pay the bills is fully as much in the San Francisco County Hospital or any other govern-

ment hospital as it is in those under private management.

Most, if not all the hospitals, so unsparingly and unfairly criticized by Emerson are bearing community burdens by taking care of patients who pay less than cost and many who pay nothing at all. It is natural that the trustees and administrators of these hospitals should resent implications of incompetency or worse.

"Middle class" is an indefinite term often combined with platitudinous phrases, which conceals what is meant. What is your definition for "middle class"? In political propaganda that "expresses great human interest," it is often used as a synonym for "the peepul." It is impressively ambiguous. Various "economists" rate "middle class" as people receiving compensation anywhere between \$1500 and \$5000 a year. Some place restrictions and conditions of one sort or another besides the money income. Physicians themselves and those engaged in the administrative and technical work of hospitals are "middle class" people if judged by average income.

As another evidence that Emerson reflects his peculiar views for the socialization of medicine in his "survey," we find that he recommends the establishment of "evening pay clinics" for those who work during the day and are "unable" to pay.

Clinics of this kind were first advocated during the time when a day's work was twelve or more hours. Physicians' services are available in their offices and elsewhere at hours convenient to all the people who work upon any of the usual eight-hour shifts that constitute a day's work in California. Furthermore, there is an educated licensed physician in San Francisco to each four hundred people, a physician's office for each six hundred people, and a drug store for each four physicians. Under a resolution of the California Medical Association, each physician's office is a "Health Center," where people may pay whatever proportion of the physician's regular fee they can afford to pay. Finally, a considerable number of evening clinics have been started by various influences at various times, and all have closed their doors for lack of patients.

Emerson's criticism of the physicians of San Francisco in his statement that school children are not adequately examined is also challenged. If Emerson had criticized that group of non-medically educated people who are making diagnosis and otherwise interpreting health conditions of school children by the use of scales, measuring-rods and a kind of a printed key of averages, his statement would be generally commended by those who know. It is always much safer to criticize physicians, because they will stand more before making their resentment manifest.

There are other fundamental defects in Emerson's superficial "survey," which will receive our attention at a later date, providing anyone takes the "survey" seriously and attempts to act upon it.

#### PERIODIC MEDICAL EXAMINATIONS

Practically every normally thinking person recognizes the value of periodic medical examinations. The query was recently put to a large group of miscellaneous people met on the street and in pub-

lic places. Except for the few who hold curious ideas about disease, they all recognized the value of such an examination.

Such a survey brings out some interesting facts: The most important is, that a large percentage of people do not know how to proceed to get the examination. So many organizations have so thoroughly propagandized the public with so many theories that an amazing proportion of them no longer know what to think. They have been taught to consult this organization for this and another one for that, until they seem to think that physicians' offices are no longer open to them unless they apply through some organization.

Then, too, many people realize that periodic medical examinations are rapidly developing into a large private business. There is no reason why financial organizations should not develop this field, as they are doing in rapidly increasing numbers. After all, it is a kind of insurance comparable to other forms of life insurance. *However*, a surprising number of people, seeing the extensive advertising of life-extension institutes, who are conducting a reputable business venture in an ethical manner, are likely to have an unexpected query regarding the altruism of voluntary agencies promoting periodic examinations purely because of their intense love of their fellow-man. Some people express a normal curiosity as to what the relations are between some of these welfare movements and private business.

Another class of people wonder whether a periodic examination consists in filling out one or another of a variety of questionnaires provided by all sorts of societies, or whether it is a matter of scales, measuring-rods, and a table which interprets measurements in terms of health.

Most of these movements, except the business organizations and physicians, are quite busy trying to sell an idea long since sold, and they fail to sell a method of procedure because they cannot agree upon one. Most important of all, they fail to recommend the only procedure that can succeed or live, and that is, that these examinations can be made only by educated physicians, and that any educated physician can, and is ready to, make such examinations at any time.

Hundreds of physicians in California and elsewhere are making these examinations daily for life extension institutes under one name or another, and are being compensated for their work. There is a lot of propaganda being put out by some of the "uplift" organizations to the effect that only certain specially qualified physicians of their own choice are competent to make periodic medical examinations. Some of this propaganda is carried forward by certain physicians. They are usually of the kind who criticize their colleagues in their home towns, and some of them travel and spend a lot of time proposing to educate their fellow physicians. As a matter of fact, any educated physician can make these examinations, and they cannot be made by anyone else.

It is not love of humanity that prevents some organizations from acknowledging this fact and

urging their followers to utilize medical methods for medical results.

The American Medical Association has prepared the way for physicians to emphasize the value of periodic examinations and to conduct them in their own offices. The House of Delegates passed the following resolution on the subject in 1922:

"Whereas, The need and value of periodic medical examination of persons supposedly in health are increasingly appreciated by the public, it is recommended by the Council on Health and Public Instruction that the House of Delegates authorize the council to prepare suitable forms for such examinations, and to publish them in the journal of the American Medical Association; and that the county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge, and that all others are expected to pay for such examinations."

Suggested forms and methods of procedure have been prepared by the Association, and physicians can secure these at a nominal expense by writing to the secretary of the A. M. A., 535 North Dearborn street, Chicago.

#### ATTENTION, MEDICAL OFFICERS!

All medical men who desire appointment as officers in the Officers Reserve Corps are now eligible, subject to the usual physical examination. Each appointment is based upon former rank and record of service.

As the country needs medical men to complete its national defense plan, there should be a prompt and general response from the members of the Medical Association of California. After November 11, 1923, appointments upon the present basis will be discontinued. After that date you will waive your right to an appointment based upon your former record of service.

Colonel Charles W. Decker, a member of the Los Angeles County Medical Society and special committeeman of the Medical Organization Association of the Army of the United States, has received a telegram from Surgeon-General Ireland, endorsing the appeal to former medical officers and urging all of them to join the colors again. The surgeon-general has stated in his report that the Medical Department was better organized and better prepared for the strenuous service of the World War than any other department.

The organization of Medical Officers Reserve Corps will insure better service whenever our country calls or emergency demands. A commission in the Medical Reserve will not demand a sacrifice, as it will not take the busy physician away from his practice. It will, however, help the Government to carry out the plans authorized by Congressional Act for defense in time of war.

Your application, accompanied by the report of your physical examination, should be forwarded to Lieutenant-Colonel H. R. Richmond, Liaison Officer, 625 Detweiler Building, Los Angeles, California. Act promptly; after November 11, 1923, it will be too late.

### 1924 MEETING OF CALIFORNIA MEDICAL ASSOCIATION

The 1924 meeting of the California Medical Association will be held at the Los Angeles Biltmore, Fifth and Olive streets, Los Angeles, commencing Tuesday, May 13, 1924.

The Association is assured by the committee on arrangements, Drs. Kiger, McArthur and Shoemaker, that the Los Angeles Biltmore can accommodate both the general session and the fifteen special sections.

### CORRECTION

Through an error on the part of the Journal, the name of Dr. Richard O. Schofield, Colfax, was appended to an advertisement in the September issue on page 46. The name of Dr. Schofield has no connection with this advertisement and should not have thus appeared.

### HOSPITAL CONFERENCE PROGRAM

The third annual Conference of the Hospitals of California, under the auspices of the League for the Conservation of Public Health, will be held at the Fairmont Hotel, San Francisco, October 18, 19, and 20. The program presents subjects of vital importance to everyone interested in hospital betterment.

#### PARTIAL PROGRAM

##### FIRST MEETING

Thursday, October 18, 10 a. m.

Fairmont Hotel, San Francisco

Dudley Smith, M. D., President of the League for the Conservation of Public Health, Presiding.

1. "The Duties and Responsibilities of the A. M. A. in Hospital Betterment"—Ray Lyman Wilbur, M. D., President American Medical Association.
2. "The California Medical Association and Hospital Betterment"—T. C. Edwards, M. D., President California Medical Association.
3. "Hospitals as Educational Agencies"—H. S. Pritchett, Ph. D., President Carnegie Foundation for Advancement of Teaching.
4. "Hospital Hospitality"—The Rt. Rev. W. F. Nichols, D. D., Bishop of California.
5. "Hospital Betterment in California"—W. T. McArthur, M. D., Los Angeles.

##### SECOND MEETING

Thursday, October 18, 2 to 5 p. m.

Fairmont Hotel, San Francisco

Percy T. Magan, M. D., Vice-Chairman, Presiding.

Subject—"How May Hospital Care Be Furnished Most Economically, Adequately and Efficiently to Those Who Cannot Afford to Pay the Full Cost of Such Service?"

Opening—George B. Somers, M. D., Lane and Stanford University Hospitals, San Francisco.

Discussants—L. S. Schmitt, M. D., University of California Hospital; D. H. Trowbridge, M. D., Burnett Sanitarium, Fresno; W. B. Coffey, M. D., St. Francis Hospital, San Francisco; A. S. Keenan, M. D., Mary's Help Hospital; S. H. Buteau, M. D., Samuel Merritt Hospital; Mrs. Horatio Walker Jr., The Hospital of the Good Samaritan, Los Angeles; Mr. Luther G. Reynolds, Methodist Hospital of Southern California; Sister Veronica, St. Mary's

Hospital; Mrs. Henry Kiersted, Children's Hospital; Charles G. Levison, M. D., Mt. Zion Hospital; George H. Juilly, M. D., French Hospital; H. H. Johnson, M. D., St. Luke's Hospital; Mrs. J. P. H. Dunn, Fabiola Hospital, Oakland; D. A. Beattie, M. D., San Jose Hospital; J. W. James, M. D., Sutter Hospital, Sacramento; Emma McKay, M. D., Hazel Hawkins Memorial Hospital, Hollister.

Subject—"Group Nursing."

Opening—Mary S. Power, University of California Hospital, San Francisco.

Discussants—Miss Alice G. Henninger, Seaside Hospital, Long Beach, Cal.; Miss Helena Rice, St. Helena Sanitarium, California; Miss Grace Kennedy, St. Luke's Hospital, San Francisco.

Question and Answer Conference—The method of answering practical questions on hospital problems so effectively used at two previous conferences will be followed this year.

#### THIRD MEETING

Friday, October 19, 9 a. m. to 12 noon

John H. Graves, M. D., Presiding.

Subject—"What is the Best Method of Articulating the Hospital with Its Various Legitimate Contacts? Pathology and Clinical Laboratories, Radiology, Public Health Department, Nursing, Dental Department, etc."

Opening—William Ophuls, M. D., Dean Stanford University Medical College; Walter V. Brem, M. D., Los Angeles; H. E. Ruggles, M. D., San Francisco; William C. Hassler, M. D., Health Officer, San Francisco; Dr. Guy S. Millberry, Dean Dental College, U. C.; Miss Anna C. Jamme, Director State Bureau of Registration of Nurses.

Discussants—Mr. J. B. Levison, Mt. Zion Hospital; H. P. Wilson, M. D., Murphy Memorial Hospital, Whittier; N. N. Wood, M. D., Los Angeles County Hospital; Sister Mary Ann, St. Vincent's Hospital, Los Angeles; James B. Cutter, M. D., Children's Hospital, San Francisco; R. G. Brodrick, M. D., Alameda County Hospital; Herbert O. Collins, M. D., Director-General Hospital of Fresno County; A. S. Musante, M. D., St. Joseph's Hospital.

Subject—"Medical Social Service in Its Relation to the Patient and Hospital."

Opening—Miss N. F. Cummings, Lane-Stanford Hospital, San Francisco.

Discussants—Miss Katherine Felton, Associated Charities, San Francisco; Miss Josephine Abrahams, Mt. Zion Hospital, San Francisco.

#### FOURTH MEETING

Friday, October 19, 2 to 5 p. m.

Subject—"Economic Value of Nursing School to the Hospital."

Opening—Sister Paschal, St. Mary's Hospital, San Francisco.

Discussants—Miss Martha E. Borg, White Memorial Hospital, Los Angeles; Miss Laura L. Mitchell, Pacific Hospital, Los Angeles; Miss Kathleen Fores, Children's Hospital, San Francisco.

Subject—"Hospital Administration, Including Methods of Accounting, Reports, Methods of Admission, Classification and Discharge of Patients."

Opening—Robert G. Sproul, Comptroller University of California.

Discussants—G. W. Curtis, Santa Barbara; Mr. John J. O'Connor, Manager St. Francis Hospital; E. S. Erwin, Stanford University; Mr. H. S. Hudd, Samuel Merritt Hospital; Mr. A. E. Roth, Stanford

University; N. T. Enloe, M. D., Chico; O. G. Wierski, M. D., San Diego County Hospital; Miss Florence Klaeser, White Hospital, Sacramento; C. Van Zwalenberg, M. D., Riverside Community Hospital.

As the narcotic problem is largely a medical and hospital problem, the fifth meeting of the Hospital Conference will be devoted to discussing, "What Should California Do to Improve the Narcotic Situation in Our State?" Among the speakers will be Curtis D. Wilbur, Chief Justice of the Supreme Court of California; W. T. Williamson, M. D., President Mountain View Sanitarium, Portland, Oregon; James Rolph, Jr., Mayor of San Francisco; Mrs. D. E. F. Easton, President City Federation of Women's Clubs; Louise B. Deal, M. D., Chairman Anti-Narcotic Committee.

Groups interested in Hospital Staffs and Staff Organizations; Ambulatory Patients' Departments and Services; Laboratory Technicians; Physiotherapists; Roentgenologists; Library and Clinical Record Technicians; Organization Management; Hospital Accounting; Dietitians; Management Municipal, County and State Hospitals, will discuss special phases of their particular hospital work at Group Luncheons on Thursday, October 18, and Friday, October 19.

A splendid program will be presented by the State League of Nursing Education at a luncheon at the Fairmont Hotel, Friday, October 19, to which all the Hospital Conference delegates are invited. "Significant Progress in Nursing Education" will be reviewed by Miss D. Dean Urch, Superintendent of Nurses, San Francisco Hospital; "The Hospital's Responsibility for the Welfare of Student Nurses—Physical, Dietary, Recreational, Social," will be discussed by:

Ethel Owen, M. D., Lane-Stanford Hospital, San Francisco; Miss Ethel Thompson, Dietitian, San Francisco Hospital, San Francisco; Miss Ruth Heyneman, Recreational Director, City Playgrounds, San Francisco; Miss Lucy W. Stebbins, Dean of Women, University of California, Berkeley.

Miss Janet E. Cameron, superintendent of nurses, Alameda County Hospital, will preside, and Miss Anna C. Jamme, president of the State League of Nursing Education, will deliver the opening address at this group luncheon.

Saturday morning, October 20, will be devoted to visiting the following hospitals, which will have representatives ready to welcome delegates and guests and to show all departments as they operate: Lane and Stanford University Hospitals; University of California Hospital, San Francisco; San Francisco Hospital; Franklin Hospital; St. Mary's Hospital; Children's Hospital; St. Luke's Hospital; Southern Pacific General Hospital; Mount Zion Hospital; French Hospital; Hahnemann Hospital; St. Francis Hospital; Mary's Help Hospital; St. Joseph's Hospital; Alameda County Hospital, San Leandro; Fabiola Hospital, Oakland; Providence Hospital, Oakland; Livermore Sanitarium, Livermore; The Samuel Merritt Hospital, Oakland.

Charles D. McGettigan, M. D., chairman of the executive committee, League for the Conservation of Public Health, will preside at the final

conference meeting, October 20, at which the reports of all special committees will be heard and the business before the conference will be disposed of.

**Epidemiology of Colds in Infants**—Five hundred cases of colds were studied by Walter Fritz Winholt and Edwin Oakes Jordan, Chicago (Journal A. M. A., July 28, 1923). There was a distinct history of a cold in some member of the family in 290 of the 500 families in which the baby had a cold, but in only 180 of the families to which the normal babies of the control series belonged. That is, 58 per cent of the babies having colds at the time they were brought to the infant welfare stations had presumably been more or less in contact with other cases of cold in their respective families, while only 36 per cent of those without colds had been subject to similar contact. Figures given seem to indicate that in families in which there are babies with colds there is much more likely to be a history of cold in the mother than in families in which the babies are free from colds, but that the occurrence of a cold in the father is not manifestly related to a cold in the baby. In families in which members other than the mother or father, presumably in most cases other children, have colds, babies with colds are somewhat more numerous than babies without colds. The relatively close and prolonged association of mother and baby may account for the observed differences. So far as these facts go, they distinctly favor the view that at least some types of common cold are due to contact infection. The incubation period of colds is probably very short. Nearly all the babies' colds which were contracted after exposure within the family showed symptoms before the preceding patient's cold had disappeared. Coincident ailments, indicating lowered resistance, especially those of deranged metabolism, were much more common in babies with colds than in those without colds.

**Socializing Medicine**—About a year ago we called attention to the effort on the part of the University of Michigan to socialize medicine. Subsequently the medical profession of Michigan took occasion to question the propriety of putting into operation some of the socialistic schemes proposed and concerning which we had offered adverse comments, with the result that the medical leaders in the university disclaimed any intention of adopting any plans that could in any way be considered as socialistic or communistic in character. However, they never have explained away the plan for creating community clinics in the various populous sections of Michigan, such clinics to be under the supervision of the university (State controlled), nor have they been able to explain the reasons for requesting the building of an enormous hospital in the small city of Ann Arbor, the home of the university, with facilities for caring for probably twenty times more patients than can be used for purely teaching purposes. Before the medical profession of Michigan really was awake to the dangers that threatened, a large appropriation was secured and the hospital was started. The hospital never has been completed, for in addition to the very large amount of money that already has been put into it a still larger sum is required to complete it, and today the large and incomplete buildings stand as an expensive monument to the effort on the part of the medical department of the University of Michigan to create a feature that undoubtedly eventually must become a feature of so-called State medicine.—Editorial, The Journal of the Indiana State Medical Association, July, 1923.

## COUNTY NEWS

### FRESNO COUNTY

**Fresno County Medical Society** (reported by John D. Morgan, secretary)—The regular meeting of Fresno County Medical Society was held September 4, 1923, at the General Hospital of Fresno County. There were thirty-five present.

John Rehfisch of San Francisco read a paper on "Deep Therapy Radiations." F. H. Rodenbaugh of San Francisco spoke on "Recent Advances by X-ray." Discussed by W. G. Milholland and Frances B. Sheldon.

Dr. O. B. Doyle, a member of Fresno County Medical Society, passed away August 28, 1923, and the following resolution was passed upon his death:

Whereas, Divine Providence has deemed it wise to remove from our midst Dr. O. B. Doyle; now, therefore, be it

Resolved, That in the death of Dr. Doyle the medical profession has lost a valuable representative, the Fresno County Medical Society a valuable member, and each and every physician a good friend; and be it further

Resolved, That we extend to the bereaved family our deepest sympathy; it is also further

Resolved, That a copy of these resolutions be placed upon the minutes of the Fresno County Medical Society, a copy sent to the family, and a copy printed in appropriate form to be displayed in the office of each member of Fresno County Medical Society for one month as a token of our respect and esteem.

Fresno County Medical Society,  
J. L. Maupin,  
C. D. Collins,  
D. H. Trowbridge.

### LOS ANGELES COUNTY

**Los Angeles County Medical Association** held no regular meetings in September, but will resume its meetings in October.

**Dedication of St. Mary's Hospital, Long Beach.**—Approximately 3000 people attended the formal dedication of St. Mary's Hospital at Tenth street and Linden avenue, Sunday afternoon, August 26, 1923. Bishop John J. Cantwell was the principal speaker, and in his address stressed the devotion of the Sisters of Charity of the Incarnate Word, who are conducting the hospital. B. Von Wedelstaedt, M. D., secretary of the Harbor branch of the Los Angeles County Medical Association, in behalf of that organization, and H. G. Wilbur, M. D., the president, welcomed the new institution into the life of Long Beach. The hospital was formerly known as the Long Beach Hospital and Sanitarium before its purchase by the Sisters. Mother Placidus will have supervision of the hospital.

**Important Action Taken by Lincoln Hospital**—Harlan Shoemaker, M. D., secretary of the Los Angeles County Medical Association, has received the following letter from the Lincoln Hospital:

"Acting on the suggestion of our medical staff, the board of directors of the Lincoln Hospital Association has instructed me to notify the members of the medical profession of Los Angeles County that, beginning September 1, 1923, the Lincoln Hospital, located at 453 South Soto street, Los Angeles, will be open only to physicians eligible to membership in the American Medical Association.

Respectfully,

M. Janie O'Neill, R. N., Superintendent."

(From the Bulletin of the Los Angeles County Medical Association.)

### SAN DIEGO COUNTY

**San Diego County Medical Society** (reported by Robert Pollock)—The San Diego County Society resumes its scientific sessions after the summer recess with a clinical meeting in the County Hospital, September 11. Members of the medical staff were present and discussed current cases of interest.

Ground has been broken during the past week for the new million dollar hospital for the Sisters of Mercy. This is eventually to take the place of the present St. Joseph's Hospital on University avenue, and will be a strictly modern hospital in every sense of the term. San Diego is fortunate in being able to place its newest hospital close in, accessible from every part of the city and at the same time in a quiet, detached and wonderfully scenic environment.

B. J. O'Neill has just returned from an extended trip abroad, during which time he visited the leading clinics of Great Britain and continental Europe.

L. H. Redelings announces his association with James Churchill in the Electric building, where they will continue to practice internal medicine.

The society mourns the loss of one of its former members, Dr. Claude Magee, who died recently in Los Angeles after a very brief illness. Dr. Magee was for many years a member of the San Diego Society, which latter looks upon his father, Dr. Thomas L. Magee, as the dean of the San Diego profession.

**The San Diego County General Hospital**—The following internes are announced for service beginning July 1, 1923: Dr. Nies, graduate of the College of Medical Evangelists, Los Angeles; Dr. Paez, graduate of Rush Medical College Chicago; Dr. Duncan, graduate medical department, University of Indiana; Dr. Leland, graduate College of Medical Evangelists, Los Angeles; Dr. Clark, graduate Jefferson Medical College, Philadelphia.

The hospital has just installed complete a new high-pressure sterilizing outfit in the surgical department. The X-ray department has been improved by the addition of a new Waffler transformer cabinet.

The County Board of Supervisors has recently bought a model dairy farm of about 110 acres, on which they will erect proper buildings for the housing and care of the indigents now cared for in the hospital. This will release considerable space for legitimate hospital purposes.

The Board of Supervisors is also planning extensive improvements about the grounds and approaches to the hospital, including boulevards and parking of a beautifying character and the paving of driveways from the nearest street car lines. The board has also recently installed new concrete tennis courts for the use of the internists and nurses.

The medical profession of the county is happy in having the co-operation of so intelligent and efficient Board of Supervisors. About a dozen young women are already enrolled for the freshman class in the nurses' training school, taking up their work in September.—(The Bulletin of the San Diego County Medical Society.)

**Naval Hospital Note**—The Post Convention Clinic at this hospital on the third of July started with an exhibition on the hospital grounds of a complete regimental field hospital outfit such as is held in readiness for emergency use at the Marine base. By permission of Brigadier-General Pendleton we were allowed the use of this outfit, which was explained by Commander J. L. Neilson, M. C., U. S. Navy. The outfit consisted of dispensary tent, with all its equipment; a ward tent, six cots provided with mosquito bars, operating tent with complete outfit, medical officers' tent, tent for use by enlisted men, and a commissary tent. There was, in addition, a fully equipped field kitchen, sanitary latrines, urinals, garbage incinerator, Lyster bag filled with

water, two adjoining small water reservoirs, one of which was protected against mosquito larvae by the use of kerosene, and the other by minnows, showing the methods in use in tropical countries against the mosquito pest.

At about 12 o'clock an airplane marked with the Red Cross appeared over the hospital to indicate the transfer of a patient by airplane to this institution. Due to the fact that landing facilities in this vicinity were not available, the airplane had to return to the Marine base landing place for the transfer of patient to ambulance.

An informal luncheon was served at the Subsistence building to the visiting physicians, which was attended by about fifty to sixty physicians.

The scientific part of the meeting commenced at 2 o'clock, and was opened by introductory remarks by myself, in which the importance of tropical diseases to the Navy was considered. The data for the paper read were gathered from available articles contained in the Naval Medical Bulletin and also from data derived from other sources. To emphasize the importance of the subject the experiences of the Navy with yellow fever, aboard ship principally, were gone into as far back as 1878. Outbreaks of black water fever on board ship were mentioned; precautionary measures used on board ship, especially in Asiatic waters, against the outbreak of tropical diseases, were dwelt upon. The prevailing tropical diseases in Guam, Hawaii, Samoa, the Philippines and West Indies were brought to the attention of the audience. Illustrations from articles written by members of the Naval Medical Corps were shown; likewise many photographs typifying the diseases mentioned, which had just been received from the Naval Hospital, Cacao, Philippine Islands, were shown.

Lieutenant F. E. Miller, M. C., U. S. Navy, presented a series of cases of ankylostomiasis treated with carbon tetrachloride. He pointed out that this is the best treatment so far developed; that one course of carbon tetrachloride will cure a majority of cases, and that two courses will cure 90 per cent of cases. It was emphasized that many cases of ankylostomiasis presented tachycardia and tremor and that all such cases should be differentiated from autonomic imbalance and basal metabolism estimations performed.

Lieutenant-Commander W. H. Connor, M. C., U. S. Navy, presented cases of filariasis, and brought out the life history of the filaria within the human host and the mosquito, the factors necessary for its propagation, the various pathological conditions that filaria may cause, and the different drugs that have been and are being used for its eradication. The surgical treatment of certain forms of elephantiasis was mentioned.

Lieutenant-Commander J. B. Pollard, M. C., U. S. Navy, presented three cases of benign tertian malaria, with a short discussion of the subject in general, including geographical distribution, epidemiology, modes of infection, and treatment. Special stress was laid upon intravenous quinine therapy, and the use of this was strongly advised in all cases of malignant tertian infections. He also invited attention to the rather pertinent question of the incidence of malaria in the Sacramento valley of this state, following the introduction of artificial irrigation. Following his talk the three types of stained specimens of the parasites were demonstrated microscopically.

Lieutenant C. L. Andrus, M. C., U. S. Navy, presented cases of intestinal flagellate infestation, emphasizing the point that with our increasing knowledge of these protozoal parasites we should no longer look upon any of them as harmless organisms, but should in every case consider them as potentially pathogenic invaders of man in poor standing. In speaking of the importance of ascaris lumbricoides in relation to the surgical abdomen, a number of cases were cited from personal experience, in which the ascaris was responsible for a

wide variety of abdominal surgical pictures and conditions.

Lieutenant-Commander W. D. Owens, M. C., U. S. Navy, presented a series of twenty cases of amoebiasis taken from the records of the hospital during the past two years. It was emphasized that increasing accuracy of diagnosis and more frequent examinations for intestinal parasites is rewarded by an increased number of cases in which amoebae are found present and associated with the patients' symptoms. Over half the cases presented were of the non-dysenteric type and offered a more interesting clinical study. The experience in the treatment of cases of amoebic dysentery at the Naval Hospital indicates that cures may be obtained with the ipecac transduodenal method of treatment or with the emetine hydrochloride and salvarsan treatment, but that emetine alone will not cure amoebic dysentery.

Lieutenant-Commander H. A. Garrison, M. C., U. S. Navy, spoke of the prevalence of gangosa in the Ladrones Islands, and gave it as his opinion that the disease might possibly be a quaternary form of syphilis, the islands having for centuries been visited by whalers, and later having been garrisoned by Spanish soldiers, both offering strong possibilities of infection of the native element. This opinion seems to be supported by the efficacy of the antisiphilitic treatment. Many typical pictures of cases of gangosa were shown before and after treatment with salvarsan.

Lieutenant-Commander Frederick Ceres, M. C., U. S. Navy, gave a talk on the duties of flight surgeon.

Lieutenant H. S. Sumerlin, M. C., U. S. Navy, demonstrated tropical disease slides. The following microscopic specimens were shown: Filaria bancrofti, living embryos; *E. histolytica*, motile; *E. histolytica*, encysted; Flagellates, cercopomas intestinalis, motile; *Monila psilos* (Ashford); Hook-worm ova; *Trypanosoma cruzi*; *Leischmania infantum*; *Schistosoma mansoni*; *Schistosoma japonicum*; *Malaria*, tertian; *Malaria*, quartan; *Malaria*, aestivo-autumnal.

The clinic was concluded at about 5 p. m. The number in attendance outside of members of the Medical Corps of the Navy was fifty visitors.—(F. W. F. Wieber, M. D., The Bulletin of the San Diego County Medical Society.)

**Paradise Valley Sanitarium**—The new 100-bed addition to the Paradise Valley Sanitarium is now rapidly filling up with patients and is relieving the congested condition of that institution.—(Bulletin of the San Diego County Society, August 10, 1923.)

#### SAN FRANCISCO COUNTY

**San Francisco County Medical Society** (reported by J. H. Woolsey, secretary)—During the month of August, 1923, the following meetings were held:

Tuesday, August 7—Committee on Medicine. (1) Calcification in Brain Tumors, R. R. Newell; (2) Consideration of Some Interesting Congenital Heart Lesions, C. H. Arnold.

Tuesday, August 14—General Meeting. (1) Studies on a Patient with Pituitary Dysfunction, W. T. Cummins and W. F. Schaller; (2) Some New Therapeutic Applications of Carbon Tetrachloride, H. E. Alderson; (3) Headaches of Ocular Origin, Roderic O'Connor.

Tuesday, August 21—Committee on Industrial Medicine. (1) Industrial Injuries Affecting the Genito-Urinary System, L. P. Player; (2) Industrial Injuries to the Eye, William F. Blake.

**St. Joseph's Hospital Staff Meeting**—At the monthly meeting of St. Joseph's Hospital staff of San Francisco on September 12, "Practical Endocrine Therapy," by A. C. Bothe, and "Insulin in Surgery of Diabetics," by J. F. Cowan, were the features. R. V. Lee and E. Shepardson discussed cases illustrating the latter topic.

T. W. Cummins reported upon new containers for

laboratory specimens and regulation of fees for examination. I. C. Gobar presented case histories of cirrhosis of the liver and ruptured appendix, and William Quinn one of toxic nephritis in a newborn.

On October 10, Harold Wright will speak on "Neuro Circulatory Asphyxia," and Paul Castelhun on "Indications and Contra-Indications for Ochsner Treatment."

**Meeting of Catholic Hospital Association—** The California, Arizona and Nevada group of the Catholic Hospital Association held its annual meeting in San Francisco the 22d and 23d of August, under the presidency of Sister Zoe of Mary's Help Hospital. This is the second annual meeting of the conference in which representatives of all Catholic hospitals of the three states assemble and discuss various phases of hospital management and the results of experiments tried during the past year.

In addition to the Sisters and officers of the association, Rev. P. J. Mahan, S. J., vice-president of the Association of Catholic Hospitals of the United States and Canada, was present and took part in the work. The committee of arrangements included William C. Hopper, A. S. Keenan, A. S. Musante, and V. C. Derham. The convention was opened by an address of welcome and prayer by Archbishop Hanna.

#### SONOMA COUNTY

**Sonoma County Medical Society** (reported by N. Juell, secretary)—The society met on Thursday, September 13, in Santa Rosa, with twenty-one members present, thirteen absent, and one visitor.

Joseph H. Shaw, recently returned from an eighteen months' study in European medical centers, gave a vivid picture of the conditions and his experiences in meeting many of the greatest medical men in Europe.

#### SIR WILLIAM MACEWEN'S ADDRESS TO THE CALIFORNIA ACADEMY OF MEDICINE

Sir William Macewen, Regius Professor of Surgery in the University of Glasgow, recently passed through San Francisco on his way to Australia as Ambassador from the British Medical Association, of which he is past president, to the Australian Medical Association in connection with a proposed union of the two societies.

On his journey through the United States he made the ascent of Pike's Peak, visited Salt Lake City, spent a day among the orange groves of Southern California, another in the Giant Forest east of Visalia and two days in San Francisco.

On September 20 he was the guest of the California Academy of Medicine, where he spoke before an audience of some 150 physicians. Among those present were Ray Lyman Wilbur, T. W. Huntington, Adolph Barkan, James H. Parkinson, Stanley Stillman, Emmet Rixford, Wallace L. Terry and many others who had attended the first course of Lane Medical Lectures.

In his address he referred to his former visit to San Francisco when he gave the first series of Lane Medical Lectures—ten lectures on the surgery of the brain in 1896. Being in a reminiscent mood, he told of how much at home he felt in California, though he added that might be considered natural since a Scotchman is said to be never so much at home as when he is abroad. He characterized Dr. L. C. Lane as a man of great erudition, whose pocket copies of Tacitus and Virgil were well thumbed. He spoke also of Dr. Edward R. Taylor, physician, lawyer, poet, who has just recently passed on. He remembered also "two byes"—Stillman and Rixford. He wondered why we are continually asking people to talk to us—we seem not to appreciate the beautiful communion of silence.

He illustrated the idea by the story of Emerson's call on Carlyle, when the two great authors sat in silence and smoked and smoked and smoked, and when Emerson rose to go at the end of two hours, Carlyle grasped his hand and said, "Aye, mon, but we've had a gra-a-and time."

He drew a picture of the age-old sequoia looking down in kindly silence on the chattering squabbles of a group of chipmunks over some bits of nut candy, and suggested that it would look down with equal serenity on the similarly trivial struggles of men.

His principal address turned on the matter of using one's faculties—his eyes, his ears, and common sense—in surgery, instead of relying exclusively on what is printed in books. He asked what would happen if all the books were burned, and answered the question by suggesting that in that event some new books might be written. He used as a title, "The Physics of the Pleura in Relation to the Surgery of the Lung and Pleura"—a field in which he was a pioneer and early combated the then prevalent idea that the instant the pleura is opened ever so slightly the lung will collapse for the reason that it is held in contact with the parietal pleura by atmospheric pressure.

In furtherance of his idea Sir William cited the example of the toy which most boys have used—the wet leather sucker, which, held by a string fitted in its center, will lift a heavy stone. He recalled a dinner given many years ago in his honor by some members of the Royal Society, when he asked for an explanation of the phenomenon. The physicists present answered to a man, "atmospheric pressure." "Well, if it were atmospheric pressure, and the sucker and stone were suspended in a bell-jar and the air exhausted, the stone would fall?" "Yes, surely." "Ay, but it doesn't." He submitted the matter to Lord Kelvin (Sir William Thompson), who was inclined to view experiment with suspicion, as prone to lead to erroneous conclusions. Lord Kelvin became so absorbed in the problem that Lady Kelvin asked Dr. Macewen, "What is it that you have done to my husband? He can neither eat nor sleep since you called upon him the other day." In a few days Lord Kelvin called on Dr. Macewen in triumph. "I have it! I have it! It is capillarity, molecular adhesion, an immense force, and here is the formula for it."

Sir William held that so long as the two layers of the pleura—the conjunctiva, pericardium, peritoneum, etc., for that matter—are kept moist and in contact, they adhere because they are "optical" surfaces; that if the air in a pneumo-thorax reappears after aspiration as in perforating injuries of the lung, wide surgical opening should be made and the wound packed to provide a vent for the air, whereupon if the chest wall be compressed so as to bring it into contact with the collapsed or compressed lung the moist pleural surfaces will adhere and the lung expand and resume its respiratory function at once.

The same thing is true after the removal of lung tumors if they are not so large as to leave a defect so great that contact of the visceral and parietal pleura cannot be accomplished.

Sir William further stated that because of the peculiar distribution of the blood vessels in the periphery of the lung, bleeding was more apt to be severe if the lungs were ballooned out by differential pressure. In some cases it was of advantage to work on the lung with the patient lying on that side, the work being done as it were from below. Seldom was it necessary to resort to differential pressure in surgical operations on one side of the chest. Lung abscesses should be freely opened. If too much of the lung is destroyed to permit of expansion of the lung to fill the cavity, the chest wall should be correspondingly resected. In one case operated on by him for tuberculosis of the lung with abscess he was obliged to remove the

entire lung, though he thought it prudent to leave a small piece of lung tissue which was adherent to the left subclavian vein. This bit of lung kept up an insignificant discharge long after the remainder of the wound had healed. The operation was done twenty-nine years ago and the man is still in good general health and has earned his living as a carpenter and supported his family.

In one case after excision of large areas of the left lung the patient complained of his heart flopping when he tried to turn to the left. This was remedied by fixing the pericardium to the chest wall by suture.

Sir William expressed great pleasure in being again in California, and thanked members of the Academy for the enthusiastic reception they had accorded him.

**The Physiologic Effects of Ethylene**—The toxicity of ethylene for flowering plants suggested to A. B. Luckhardt and J. B. Carter, Chicago (Journal A. M. A., March 17, 1923), the possibility that some of the toxic properties of ordinary illuminating gas for animals might be due to its ethylene rather than to its carbon monoxide content. Experiments were made on animals and on man. From the animal experiments it appears that all of the animals used (mice, rats, rabbits, guinea-pigs, and kittens) could be anesthetized with a 90 per cent ethylene mixture in one-half the time necessary to anesthetize the same animals with the same percentage of nitrous oxide. Twelve subjects were anesthetized, more or less deeply. One of the authors was anesthetized six times in three days in three weeks; the other (J. B. C.), seven times on the three days in three weeks. In neither instance did sugar or albumin appear in the urine as a result of the experiences, nor did they experience any other evil after-effects except for a slight nausea and loss of appetite, both of very temporary nature. It is evident, then, that deep surgical anesthesia can be rapidly induced by ethylene without any sense of asphyxia, but, on the contrary, with a sense of well-being and comfort. Analgesia comes on easily apparently long before complete surgical anesthesia is established. At a time when there is complete muscular flaccidity, the pulse rate is slightly decreased, if changed at all; respirations are slow but regular, and the countenance normal in color for the individual, or slightly paler. No cyanosis was ever observed. No subject ever showed any sign even suggestive of asphyxia. The induction of anesthesia was in no way unpleasant except possibly for the first few inhalations of the concentrated gas, which induced reflex swallowing. A period of excitement characterized by laughing or forced movement preceded the anesthesia in some. In others, such signs were absent during induction, but were in evidence as the person recovered from the anesthesia. Recovery from the anesthesia was always rapid on withdrawal of the gas mixture. In all, slight weakness and a sense of fatigue were experienced if the person arose from the couch almost immediately on waking up. Vomiting occurred in one early during recovery. In some, slight epigastric distress was experienced temporarily. In others, a slight nausea persisted for several hours after the administration of the gas. In none was nausea so pronounced or so prolonged as to interfere with the ingestion of the next meal. The possible advantages of ethylene over nitrous oxide, if used for human anesthesia, are: 1. Anesthesia may be maintained: (a) in the absence of all signs of asphyxia; (b) in the absence of effects on blood pressure; (c) in the absence of dyspnea; (d) with complete muscular relaxation. 2. It may be used in obstetrics, a state of complete analgesia being possible at a concentration of 80 per cent ethylene. 3. There is rapid recovery after long-continued administration, without evidence of after-effects.

## MEDICAL ECONOMICS

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**Exhibits at the Hospital Conference**—One of the instructive features of the third annual conference of the Hospitals of California, which will be held at the Fairmont Hotel, San Francisco, October 18, 19 and 20, will be the exhibits. All delegates and visitors will be given an opportunity to examine the most modern hospital apparatus and equipment. Demonstrators will be on hand to furnish practical information on the latest improvements in hospital supplies. Ample time is provided on the program before and after sessions for the delegates to become acquainted with the most modern hospital manufacturing achievements offered by the exhibitors. Among our advertisers who will have exhibits are the following:

Reid Brothers, wholesale hospital supplies; Trav- ers Surgical Company, surgical instruments and hospital supplies; Radium Chemical Company, radium and radium preparations; Mead Johnson & Co.; Walters Surgical Company, sterilizers, laboratory and sick room supplies; The Reno Optical Company, Reno, Nevada; Wilmot Castle Company, sterilizer equipment; Bischoff's Surgical House, trusses, supporters, elastic hosiery, etc.; Doctors and Nurses Outfitting Company, Inc., designers and makers of all kinds of doctors and dentists jackets, gowns, etc.; Corona-Pacific Typewriter Company, Inc., typewriters; Wilson Laboratories, Morgan & Sampson, sales agents; Bausch & Lomb Optical Company of California, eyeglasses, magnifiers and reading glasses, etc.; Fischer & Bradshaw, electric sterilizers, mercury vapor lamps, etc.; Frank F. Wedekind Company, surgical appliances; Hanovia Chemical and Manufacturing Company, Alpine sun lamp, Kromayer lamp, etc.; Bush Electric Corporation, X-ray, electro-medical and physio-therapy apparatus and supplies; Horlick's Malted Milk; The American Laundry Machinery Company.

**New Catalogue of the Frank S. Betz Company**—This company, Hammond, Ind., has just issued the new Betzco Physicians' Supply Book, displaying the entire standard high-grade Betzco line. Clip the coupon on page 420 and get your copy.

**Disposition of Ureters in Certain Abnormal Conditions of Urinary Bladder**—William E. Lower, Cleveland (Journal A. M. A., April 28, 1923), summarizes his paper as follows: "Transplantation of the ureters is an operation urgently indicated in the presence of certain malformations of the bladder, either congenital or acquired. The choice of site should be one to which the transplantation can be made with the minimum of immediate operative mortality and a maximum of ultimate comfort to the patient. From my own series, I believe that the submucous implantation of the ureters in the sigmoid or rectum by the technic first proposed by Coffey most nearly fulfills the foregoing requirements. In any case, agreement regarding the most efficient method of treating the class of patients on whom this operation is required is needed in order that the technic may be standardized. The basis of judgment for the final selection of such a standardized technic should be its ability to give to the patient the utmost possible diminution of his misery and the best possible economic status."

## Nevada State Medical Association

By HORACE J. BROWN, M. D., Reno, Secretary Nevada State Medical Association, Associate Editor for Nevada.

J. LA RUE ROBINSON, Reno, President

**Annual Meeting**—At the time of going to press the Nevada State Medical Association was in annual session at Reno. The officers and committees are:

Officers—John LaRue Robinson, Reno, president; Anthony Huffaker, Carson City, first vice-president; Rodney H. Richardson, Reno, second vice-president; Horace J. Brown, Reno, secretary-treasurer; A. J. Hood of Elko, A. C. Olmsted of Wells and W. A. Shaw of Elko, trustees.

Council—C. E. Swezy, Winnemucca; J. W. Davis, Hawthorne; A. J. Hood, Elko; S. K. Morrison, Reno; R. R. Craig, Tonopah; A. L. Haenszel, Searchlight; O. Hovenden, McGill; C. A. Lehners, Fallon; C. C. Blake, Goldfield.

Committees—Membership: C. W. West, J. B. Wilson, Hal L. Hewetson. Judicial: M. A. Robison, Donald Maclean, R. A. Bowdle. Scientific Work and Program: S. K. Morrison, A. P. Lewis, E. E. Hamer. Necrology: W. M. Edwards, F. M. Hodges, C. E. Piersall. Entertainment: S. K. Morrison, George McKenzie, W. L. Samuels. Public Health and Education: Henry Albert, W. A. Shaw, M. R. Walker. State Organizer: John A. Fuller. Delegate to A. M. A.: Horace J. Brown. Alternate: J. LaRue Robinson.

### PROGRAM

Friday, September 28, 1923, 9:30 A. M., Bowers Mansion

**Business Meeting**—Registration and payment of dues; reading of minutes of last annual meeting.

Scientific Program—Friday, 10 a. m.

President's Address—John LaRue Robinson.

Andrew Wade Morton, San Francisco—Report of a Case of Acute Osteomyelitis of the Femur. Discussion opened by J. T. Watkins, Donald Maclean, R. A. Bowdle.

William N. Kingsbury, Reno—Generalized Osteitis Fibrosa Cystica. Discussion opened by A. W. Morton, George McKenzie, T. W. Bath.

James T. Watkins, San Francisco—Infections of Certain Lymphatic Glands Which Simulate Tuberculous Disease of Neighboring Joints. Discussion opened by A. R. Kilgore, W. A. Shaw, W. M. Edwards.

Charles P. Knight, U. S. P. H. S., Washington, D. C.—Some Observations on Health Conditions in Nevada. Discussion opened by Alice L. Thompson, H. L. Hewetson, M. J. Rand.

Martin Molony, San Francisco—Congenital Diverticulum of the Posterior Urethra, with some remarks on the Modern Method of Treating Chronic Seminal Vesiculitis; lantern slides. Discussion opened by G. F. Farman, B. H. Caples, R. St. Clair.

Thomas Wilbur Bath, Reno—Resume of the Treatment of Septic and Aseptic Wounds. Discussion opened by Carl G. Wilson, M. L. Herzig, W. H. Riley.

Joseph Catton, San Francisco—How to Handle Neuroses Following Injury. Discussion opened by C. L. Tranter, R. H. Richardson, D. A. Turner.

Charles L. Tranter, San Francisco—Functional Recovery Following Operative Treatment of Brain and Nerve Injuries. Discussion opened by Jos. Catton, S. K. Morrison, R. P. Roantree.

Maxmillian L. Herzig, Seattle, Wash.—Undescended Testicle Complicating Acute Appendicitis; report of a case. Discussion opened by June Harris, George McKenzie, W. H. Brennen.

George F. Farman, Los Angeles—Some Types of Chronic Recurrent Pyelitis and Their Treatment. Discussion opened by Martin Molony, C. C. Blake, A. J. Hood.

Friday, September 28, 8 P. M.

Chamber of Commerce, Reno

**Business Meeting**—Report of Delegate to A. M. A. Reports of various committees. Election of officers. Officers to be elected: A president, two vice-presidents, secretary-treasurer, one trustee for three years to succeed A. J. Hood.

Saturday, September 29, 9:30 A. M.

Bowers Mansion

Ray Lyman Wilbur, Stanford University, president of the American Medical Association—Address.

Carl G. Wilson, Palo Alto, Cal.—A Plea for Improvement in Post-Operative Care of Laparotomy. Discussion opened by A. R. Kilgore, A. P. Lewis, W. M. Edwards.

William A. Shaw, Elko—A Peculiar Manifestation of Focal Infection; Treatment and Apparent Cure; Three Case Histories. Discussion opened by A. W. Morton, M. H. Crocker, A. R. DeCosta.

Alson R. Kilgore, San Francisco—Syphilis as a Pre-Cancerous Condition. Discussion opened by Walter Wessels, Martin Molony, V. A. Muller.

Claude E. Piersall, Reno—Present Status of X-ray and Radium Therapy. Discussion opened by A. R. Kilgore, W. N. Kingsbury, M. R. Walker.

Cullen F. Welty, San Francisco—Subject to be announced. Discussion opened by J. A. Fuller, D. L. Shaw, J. L. Robinson.

Carl L. Hoag, San Francisco—The Importance of Selecting Proper Treatment in Each Type of Goitre. Discussion opened by J. T. Watkins, R. St. Clair, E. E. Hamer.

Raymond St. Clair, Oakland—Exophthalmic Goitre; Importance of Early Diagnosis, with Report of Four Cases. Discussion opened by C. L. Hoag, M. A. Robison, W. C. Lucas.

S. M. Sproat, Portola, Cal.—Subject to be announced.

Walter Wessels, Los Angeles—Subject to be announced.

Ernest S. Du Bray, San Francisco—Diet Adjustment and Insulin Therapy in Diabetes Mellitus. Discussion opened by Walter Wessels, C. W. West, E. E. Hamer.

B. H. Caples, Reno—Bladder Decompression. Discussion opened by G. F. Farman, Alex. McIntyre, P. D. McLeod.

Sunday, September 30

Pyramid Lake

Barbecue Picnic, all day, under direction of Entertainment Committee.

Luncheon served Friday and Saturday at the Mansion. Formal banquet at the Hotel Golden, Reno, at 9 p. m. Saturday.

**News Items**—Members are urged to send any news items they may have to the Associate Editor, so that they may be sent to the California State Journal of Medicine for publication in the Nevada State Medical Association department.

**New Members**—The new American Medical Directory has just reached us, and in looking it over hurriedly we can find about thirty physicians in Nevada that are eligible for membership, and should belong to our association. Some of them have belonged, in years gone by, and had to be dropped from the roll because they were too busy to write a check for dues and send it to the secretary. Why don't you speak to your neighbor about it, if he is eligible? It would probably make you both feel better.

## Utah State Medical Association

J. R. MORRELL, M. D., Ogden - President  
WILLIAM L. RICH, M. D., Salt Lake - Secretary  
W. R. CALDERWOOD, M. D., Associate Editor for Utah

The course in post-graduate work which has been instituted by the Utah State Medical Association, and which was introduced by Harlow H. Brooks of New York last year, and was so well attended and so much appreciated by those in attendance, was continued this year by George W. Dock of Pasadena, Calif. The clinics this year were equally well attended, and those who were so fortunate as to be in attendance were greatly benefited and better fitted to render skilled service to their patients and the communities which they serve.

There was an attendance of sixty-five physicians from Salt Lake City and nearby localities, and we noticed at least one man from Idaho, our neighbor on the north.

Dock proved himself a master teacher. The intimate knowledge he exhibited of the wide range of subjects discussed in the clinics sustained for him the high opinion in which he is held by all those who know him or are familiar with his work.

His trip to Ogden and the clinic held there afforded an opportunity for many of the Ogden physicians to hear him at his best. The Ogden clinic was well attended and greatly appreciated by the Ogden physicians.

Those who were not able to attend the clinics held by Dock missed an opportunity that seldom comes our way. We commend the committee who so successfully handled the work, and hope another year will bring us equally good results.

Ralph O. Porter, the new dean of the Medical School of the University of Utah, is now on the campus, and we extend him a hearty welcome and assure him of our support and co-operation in the conduct of the Medical School.

County Medical Society work is now in full swing, and we bespeak for the officers of your association your hearty support and good-will. Let this be a year that you give to your society the best of which you are capable. Only by united effort and forward-looking can you hope to achieve the goal you have in view. Let us have some of your papers for publication in the Journal.

**Analysis of Methods of Modern Medical Education**—The reorganization of medical education is considered by William Cogswell Clarke, New York (Journal A. M. A., April 28, 1923), under five main subjects: (1) teachers; (2) students; (3) the subject matter included in a medical course; (4) methods of teaching and of study, and (5) the chief aims in medical education and the present hindrances to their attainment. Clarke's closing words show that it is his belief that the prime essential is the teacher. He says, "Only the best instructors should be chosen, because on them depends the selection of students and to a large degree their development and education. The surest way to have many good instructors available is continuously to develop them from those possessing the greatest apparent potentialities. Teachers who do not continuously prove of value should not be allowed to remain in a school. The method maintained should aim for the selection and maintenance of good teachers and laboratory workers, for under them any method of education is successful."

## BOOK REVIEWS

**The Heart in Modern Practice, Diagnosis and Treatment.** By William Duncan Reid, A. B., M. D. 352 pp. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1923.

The author has some good thoughts on the subject, and he has tried to convey those thoughts to the reader in a brief and concise manner—so brief, in fact, that at times one feels as if he is being hurried.

The book serves fairly well as a sort of review of cardiology, but it will not be of service to a student of the subject principally because of its brevity, and next because in presenting a debatable subject he does not give both sides of that subject, as he leads one to infer that "there is very little blood regurgitated into the left ventricle in cases of aortic regurgitation because the blood has not time to flow back." He does not say why it is called "aortic regurgitation" nor what causes the marked enlargement of the left ventricle, nor the diastolic murmur, nor why the blood cannot flow back from the aorta, where it is under high pressure, as rapidly as it can flow from the left auricle (where it is not under high pressure).

He speaks of methods, etc., of examining the heart and of its structural anatomy, but says nothing of the surface anatomy.

H. S.

## BOOKS RECEIVED

**The Practical Medicine Series**, comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, M. D., Volume 1, General Medicine. Edited by George H. Weaver, M. D.; Lawrason Brown, M. D.; Robert B. Preble, M. D.; Bertram W. Sippy, M. D.; Ralph C. Brown, M. D. Series 1923. Chicago: The Year Book Publishers, 304 South Dearborn street.

**The Medical Department of the United States Army in the World War.** Volume 1. The Surgeon-General's Office. Prepared under the direction of Major-General M. W. Ireland, M. D., Surgeon-General of the Army. By Colonel Charles Lynch, M. C.; Lieutenant-Colonel Frank W. Weed, M. C.; Loy McAfee, M. D. Washington: Government Printing Office, 1923.

**Hygiene of the Voice.** By Irving Wilson Voorhees, M. D., Assistant Surgeon to the Manhattan Eye, Ear and Throat Hospital; Adviser to Singers of the Metropolitan, Chicago and Century Opera Companies, etc. New York: The MacMillan Company, 1923.

**A Clinical Guide to Bedside Examination.** By Dr. H. Elias, Dr. N. Jagic and Dr. A. Luger, all of Vienna. Arranged and translated by William A. Brams, M. D., Adjunct in Medicine, Michael Reese Hospital. New York: Rebman Company.

See page 437 for Program of Annual Hospital Conference, October 18, 1920.

## Pharmacology and Therapeutics

### COUNCIL ON PHARMACY AND CHEMISTRY OF THE A. M. A.

(Reported by W. A. Puckner, Secretary)

The Council on Pharmacy and Chemistry reports a number of new remedies admitted to New and Non-official Remedies, as well as some interesting data about other remedies:

Lederle Antitoxin Laboratories—Thromboplastin (Lederle).

National Aniline & Chemical Co.—Enteric Coated Tablets Neutral Acriflavine—"National"; Ointment Neutral Acriflavine—"National," 1 per cent.

E. R. Squibb & Sons—Solution of Hypophysin (Squibb); Arsphenamine (Squibb), 1 gm.; Arsphenamine (Squibb), 1.2 gm.

Winthrop Chemical Co.—Luminal Tablets  $\frac{1}{2}$  gr. (Winthrop Chemical Co.).

#### NEW AND NON-OFFICIAL REMEDIES

**Protein Mixtures for Diagnosis**—Mixtures of two or more pollen, epidermal or food protein preparations. These mixtures are supplied in order that the number of skin tests to determine sensitiveness to proteins may be reduced. If sensitiveness to a given protein mixture is found, then tests are made with the individual proteins contained in the mixture. (See Pollen and Epidermal Extracts and Biologically Reactive Food Proteins, New and Non-official Remedies, 1923, p. 234.)

**Group Allergens Diagnostic** (Squibb)—A mixture of two or more allergens (Squibb) in equal proportions. These protein mixtures are used to determine sensitiveness to proteins. (See preceding article, Protein Mixtures for Diagnosis.) Group Allergens (Squibb) are marketed in vials containing 0.025 gm.

**Pollen Antigens** (Lederle)—In addition to the products listed in New and Non-official Remedies, 1923, p. 239, the following have been accepted: Annual Salt Bush Pollen Antigen (Lederle); Bermuda Grass Pollen Antigen (Lederle); Cocklebur Pollen Antigen (Lederle); Johnson Grass Pollen Antigen (Lederle); Mountain Cedar Pollen Antigen (Lederle); Mugwort Pollen Antigen (Lederle); Oak Pollen Antigen (Lederle); Orchard Grass Pollen Antigen (Lederle); Perennial Rye Grass Pollen Antigen (Lederle); Rabbit Bush Pollen Antigen (Lederle); Redroot Pigweed Pollen Antigen (Lederle); Russian Thistle Pollen Antigen (Lederle); Spiny Amaranth Pollen Antigen (Lederle); Yellow Dock Pollen Antigen (Lederle). Lederle Antitoxin Laboratories, New York. (Jour. A. M. A., August 4, 1923, p. 393.)

**Protein Extracts Diagnostic** (P. D. & Co.)—Protein extracts in the form of paste the base of which is a mixture of glycerin and powdered boric acid. One part represents one part of original material. For a discussion of the actions, uses and dosage, see Pollen and Epidermal Preparations and Biologically Reactive Food Proteins, New and Non-official Remedies, 1923, p. 234. Protein Extracts Diagnostic (P. D. & Co.) are marketed in collapsible tubes containing sufficient material for fifty tests.

**Group Protein Extracts Diagnostic** (P. D. & Co.)—A mixture in equal proportions of two or more Protein Extracts Diagnostic (P. D. & Co.). For a discussion of the actions, uses and dosage, see preceding article, Protein Mixtures for Diagnosis. Group Protein Extracts Diagnostic (P. D. & Co.) are marketed in collapsible tubes containing sufficient material for fifty tests.

#### PROPAGANDA FOR REFORM

**Collosol Calcium**—E. E. Prest (Brit. Med. J., Jan. 14, 1922) recommended a new "collosol" brand of

so-called colloidal calcium for the treatment of tuberculosis. T. C. Graves (Lancet, Nov. 4, 1922) discussed "Colloidal Calcium in Malnutrition, Chronic Sepsis and Emotional Disturbances." The publications of Prest and Graves serve as uncritical endorsements of another addition to the Collosol preparations. The conclusions reached by Graves concerning the beneficial action in the treatment of "Emotional Disturbances" do not seem justified by the character of the evidence he presents. Such results as he reports are common experiences without the use of medication. There is no basis, either in theory or in the evidence presented, for administering a calcium salt in colloidal form; if advisable, soluble compounds of calcium, such as the lactate and chlorid, may be administered hypodermically. Thanks to the timely report of the Council on Pharmacy and Chemistry, the Collosol preparations are not being pushed in the United States, though they are being actively exploited in England. (Jour. A. M. A., Aug. 4, 1923, p. 409.)

**C-O-M Not Accepted for N. N. R.**—The Council on Pharmacy and Chemistry reprobates that "C-O-M" is the proprietary, non-informing name under which the H. D. Frees Co., Chicago, exploits a preparation which is claimed to be the solution of magnesium citrate of the U. S. Pharmacopoeia, but to have the advantage over the official preparation in that it keeps indefinitely. The Council refused recognition to "C-O-M" because, 1, the application of a proprietary name to a pharmacopoeial article is irrational and a detriment to rational therapy; 2, as solution of magnesium citrate is readily prepared fresh and of standard quality by pharmacists, the claim of stability is not a sufficient warrant for the use of a proprietary name for an official article; 3, the therapeutic claims for "C-O-M" are unwarranted; and 4, the advertising propaganda is likely to lead to the excessive and ill-advised use of the preparation by the public. (Jour. A. M. A., Aug. 11, 1923, p. 493.)

**Two More Electronic Diagnoses**—A physician reports that one of his patients became alarmed by a diagnosis of generalized carcinoma made by an osteopath who is a disciple of Albert Abrams. In order to test the diagnostic ability of this disciple of Abrams, the physician had the patient send the Abrams disciple a specimen of blood (which was taken from a young rooster who had been confined to his coop since birth) for diagnosis. The diagnosis which was received showed syphilis, gonorrhea, generalized carcinoma, sarcoma of the spine, chronic malaria and diabetes. Another physician reports a diagnosis made by an Abrams follower on a man who is working and by no means ready to die. The diagnosis showed "diminished resistance" (an Abrams euphemism for syphilis), "carcinoma of gall-bladder," "streptococcus," "sarcoma of both kidneys, right worse," "tuberculosis of both lungs, upper right and middle left," "sarcoma," "gallstones," "malaria," and "pneumonia." (Jour. A. M. A., Aug. 11, 1923, p. 493.)

**Bacillus Acidophilus Therapy**—A method for the preparation of *Bacillus acidophilus* milk has been published by Rettger and Cheplin (Arch. Int. Med., vol. 29:357 [March], 1922). Microscopically, *Bacillus acidophilus* closely resembles the *Bacillus bulgaricus*, but cultural methods of distinction have been proposed. The therapeutic value of the various lactic acid ferment preparations is discussed in New and Non-official Remedies, 1923. While recent publications give evidence in favor of *Bacillus acidophilus* therapy, W. H. Morris expresses the belief that whatever beneficial results occurred in the cases reported by him were due to some other factor than the actual transformation of the common intestinal bacteria into the acidophilus type of organism. (Jour. A. M. A., Aug. 11, 1923, p. 494.)

**Tapeworm Remedies**—Oleoresin of aspidium and pelletierin tannate are the remedies of choice, the first being more popular. To give the remedies the best chance for action, the intestinal contents should

be reduced as much as possible by restriction of solid food and evacuation before the treatment. On the morning of the treatment the patient should stay in bed and be given from 6 to 8 gm. of oleoresin of aspidium divided into as many capsules in the course of ten to fifteen minutes. Two hours later a saline cathartic should be administered and repeated every two hours until thorough evacuation has been secured. (Jour. A. M. A., Aug. 11, 1923, p. 495.)

**The Chlorin Antiseptics**—The essential attributes of Surgical Solution of Chlorinated Soda (N. N. R.) is a definite but mild alkalinity, hypertonicity, and presence of the correct amount of sodium hypochlorite. Because hypochlorite solutions are unstable and their active component is not available in solid form, chloramin-T, dichloramin-T, and halazone were evolved. The first two have been received as worthwhile additions to our *materia medica*. Because the three products contain their chlorin in its less stable modification, the composition and purity of these products have been watched by the A. M. A. Chemical Laboratory. Recently, P. N. Leech of this laboratory reported on the quality of the market supply of American-made chloramin-T, dichloramin-T, and halazone, which are described in New and Non-official Remedies. Out of eight specimens of chloramin-T, one was considerably substandard, two were slightly substandard, and five were satisfactory. The chloramin-T tablets, chloramin-T pastes, and an aromatic powder were satisfactory. Two out of four specimens of a surgical powder were markedly decomposed. All the specimens of Council-accepted dichloramin-T complied with the standards. Re-examination of specimens of the chloramin examined five years previously showed that chloramin-T and halazone are quite stable, but the dichloramin-T specimens had decomposed somewhat. Leech believes that both the hypochlorite preparations and the chloramins are active oxidizing agents because of the positively charged chlorin atom which they contain, and that their antiseptic action depends on this. He determined that the oxidizing power of chloramin-T is much greater in neutral than in even slightly alkaline solutions. From this it is apparent that one strength of a solution of pure chloramin-T may be active as a germicide while a solution of the same strength containing sodium bicarbonate may be ineffective. (Jour. A. M. A., Aug. 18, 1923, p. 581.)

**Iodin as a Prophylactic for Goiter**—The conclusion of Marine and Kimball that the administration of iodin constitutes an efficient and safe method of preventing goiter is being amply confirmed. In Switzerland the results appear even more favorable than those reported in this country, and the goiter commission of Switzerland has recommended that this method of goiter prevention be instituted as a public health measure throughout the republic. In this country the schools of Akron, Kent, and Ravenna counties, in Ohio, have been using the method as a routine. It has been employed in Berea and Warren, Ohio, and extensively administered in some of the large factories in Cleveland. This year the schools in East Cleveland, Shaker Heights, Warren, Niles, and Findlay, Ohio; Grand Rapids, Mich., and Hammond, Ind., are using tablets, each containing 10 mg. of iodin in the form of an organic iodid, and each girl takes one tablet a week throughout the year. (Jour. A. M. A., Aug. 18, 1923, p. 582.)

**Administration of Iodid for Goiter**—For the prophylaxis of goiter, Marine and Kimball employed 2 gm. of sodium iodid given in 0.2 gm. doses daily for ten consecutive school days. This was repeated twice yearly. Marine and Kimball state that this amount of iodid is excessive and that 1 gm. of sodium iodid distributed over a longer period would be better. Sodium iodid may be prescribed in solution, a dose to a teaspoonful. If the patient be furnished with a small quantity of potassium iodid—say 1 gm.—and advised to mix it thoroughly with

1 kg. of ordinary table salt for occasional seasoning of his food at the table, he will get all the iodid that is necessary for prophylactic purposes and in an entirely unobjectionable manner. (Jour. A. M. A., Aug. 18, 1923, p. 598.)

**Bismuth Preparations in Syphilis**—The Council has issued a statement of the present status of bismuth preparations in the treatment of syphilis. In this report the history of the use of bismuth salts in the treatment of syphilis is reviewed, the evidence for the value of bismuth salts as compared with mercury preparations and arsphenamine is considered, and the dosage and danger of untoward effects are discussed. The statement of the Council concludes with the following summary:

1. Bismuth preparations have a sufficient experimental basis both for their favorable effects and limitations. The advantage consists in their distinct action on experimental syphilis. The limitations are clear, if one considers the disproportion between the large dose, which is necessary to sterilize an animal, and the small dose, which can be tolerated by man. The available information appears to show that bismuth preparations will not cure syphilis when used alone.

2. Bismuth treatment is not usually injurious if the necessary precautions (observations for beginning stomatitis, examination of urine, etc.) are observed. Intravenous injection is to be strictly avoided. The therapeutic effect of bismuth is rated by the majority of authors between arsphenamine and mercury. Bismuth compounds may be valuable in cases in which the patients are intolerant to the other drugs used in the treatment of syphilis or resistant to them, as shown by a persistent positive Wassermann reaction. (Jour. A. M. A., Aug. 25, 1923, p. 661.)

**The Thyroid Hormone**—The fact that the iodin-bearing compound, thyroxin, which has been isolated from thyroid tissue, has a marked physiologic potency has led many persons to speak of it off-hand as the "active principle" of the thyroid glands. However, Reid Hunt has carried out tests which indicated that, for certain functions at least, thyroxin shows less potency than an equivalent dose of iodin in the form of the entire thyroid gland. One is led to ask whether the iodized protein fragment represented by thyroxin retains all of the specific physiologic action of the real thyroid hormone. Hektoen, Carlson, and Schulhof report that they have detected the presence of a thyroid product, thyroglobulin, in the lymph issuing from the thyroid gland, but failed to detect the same protein in the blood stream. (Jour. A. M. A., Aug. 25, 1923, p. 665.)

**Albargin Not Accepted for N. N. R.**—The Council on Pharmacy and Chemistry declares Albargin inadmissible to New and Non-official Remedies because (1) it is an unessential modification of silver nitrate, and (2) the therapeutic claims made for it are unwarranted. Albargin is a product of the Farbwerke, vorm. Meister, Lucius and Bruening, Hoechst, a. M., Germany, marketed in the United States by the H. A. Metz Laboratories, New York. It is claimed to be a compound of silver nitrate with gelatose, containing 15 per cent of silver. Albargin is claimed to combine the advantages of albumin compounds of silver and of silver nitrate. It is claimed to dialyze through animal membrane and, therefore, to possess far greater power than other albumin compounds of silver. It is claimed to produce neither irritation nor pain. The Council found that the silver of Albargin was not combined with the gelatose, but is in the same condition as the silver of silver nitrate; that it does not dialyze through animal membrane, and that its antiseptic value is the same as that of a silver nitrate solution of equal silver content. (Jour. A. M. A., Aug. 25, 1923, p. 677.)

**Coating for Pills to Resist Gastric Juice**—The attempt to prepare pills, tablets or capsules which

will pass the stomach unchanged, but which will disintegrate in the intestine, has not proved very successful. In the main, the attempt has been to coat such pills, tablets or capsules (a) with keratin or phenyl salicylate (salol); (b) with gelatin rendered insoluble by treatment with formaldehyd, and (c) by mixing the drug with wax, solid fats or paraffin. Keratin coating has been reported unsatisfactory by the A. M. A. Chemical Laboratory. Coating with phenyl salicylate has the objection that the coating is brittle, and that it requires the administration of a considerable dose of phenol salicylate. The difficulty in the coating with hardened gelatin is that, if the treatment with formaldehyd is insufficient, the pills will not pass the stomach unchanged, and, if the treatment is prolonged, the coating will not disintegrate in the intestine. Favorable reports have been published of the method of combining drugs, such as sodium carbonate, potassium iodid, sodium salicylate, etc., with mutton suet and paraffin, or with a mixture of beeswax and castor oil previously melted together. (Jour. A. M. A., Aug. 25, 1923, p. 679.)

**Gastric Ulcers**—That gastric ulcer can be diagnosed by means of the Roentgen ray as definitely as can a fracture of an extremity, and, that if properly employed, the Roentgen-ray test is far more accurate for diagnosis of ulcer than the Wassermann test is in the case of syphilis is the claim made by Lewis Gregory Cole, New York (Journal A. M. A., July 28, 1923). The methods of studying the pathologic changes of gastric ulcers are: (1) necropsy, (2) biopsy, and (3) roentgenology. The limitations of the first two methods are apparent. The scope of the third is unlimited, and the operation is relatively simple. By serial roentgenology with examination frequently repeated, one may study the gross pathologic changes of gastric ulcer, the size and shape of the crater, the amount of induration surrounding it, its location in the stomach and its increase or diminution in size during periods of exacerbation or recession of symptoms, and may determine whether any cases of simple gastric ulcer ever become malignant. Different methods of employing the Roentgen ray in the diagnosis of gastric ulcers are (1) a fleck of bismuth subnitrate barium remaining in the crater of an ulcer; (2) symptom complexes, and (3) morphologic changes in the walls of the stomach. The first two are unreliable, and the last is accurate, as the pathologic change in the wall of the stomach can be definitely shown; it is on this, and this only, that the diagnosis can be accurately made. Many ulcers leave a scar, so that the roentgenologic appearance must be considered.

**The Relativity of the Everyday**—Whether we think in terms of three dimensions or of four, the relativity of the everyday things of life has long been apparent. We measure our pleasures and our sufferings in accordance with certain standards, or, as we say, by comparison or relatively. Here we might add as a fourth dimension, the individual capacity for enjoyment or for suffering.

Probably the thing which gives to the scientific mind the greatest pleasure is real work—work wherein the individual measures his mental powers not only against his competitors, but against previous standards set by himself. Happy is he who finds himself constantly placing his standards a little higher.

Much has been written about the value of the summer vacation, now about finished for most of us; but if this fails to bring us back to our work with a relatively greater zest and capacity, with higher standards and a clearer conception of our relativity to others, then indeed has it fallen short in some of its potential dimensions for us. (R. P., Bulletin of the San Diego County Medical Society.)

## ABSTRACTS FROM REPORTS TO AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES AT SAN FRANCISCO SESSION

(From Secretary West's Report)

**Membership**—On May 1, 1923, the membership of this Association, according to records in the office of the secretary, was 88,519, as compared with 89,048 on the corresponding date of the preceding year. The decrease to be noted is apparent, rather than actual and is to be accounted for by the removal of names from the roster which had been carried over for lack of specific instructions from State secretaries authorizing their removal.

**Component Societies**—There are 3047 counties in the United States. The 2049 component societies reported represent approximately 2400 counties, since in some instances the membership embraces physicians from two or more counties. In some of the 595 counties reported as unorganized, societies have become dormant after varying periods of organizational activity. \* \* \* \* A great many component societies are broadening the scope of their work and rendering constantly increasing service for the improvement of their members and for the public welfare. These have regular meetings with well prepared scientific programs. Many of them have weekly or monthly bulletins. Diagnostic clinics and post-graduate courses of instruction appear to be gaining favor with some of the most active and progressive societies. \* \* \* Some (county societies) are operating clinics in which the indigent receive treatment, medical or surgical, and to which those worthy are brought by lay organizations which assume the obligation of protecting the clinics against imposition.

Some county societies are providing newspapers with educational matter for their columns, this being published under the names of the societies. In all these ways, and in others too numerous to mention here, progressive county societies are striving for the improvement of their own members, and rendering public service for the honor and the benefit of scientific medicine.

**Fellowship**—In spite of the fact that more than 60 per cent of all members are Fellows, there is yet some misunderstanding and confusion with respect to "Membership" and "Fellowship." All members of constituent State medical associations are members of the American Medical Association, but those members who wish to become Fellows must make application, must subscribe for the Journal, and pay Fellowship dues for the current year, these dues and the subscription for the Journal being included in the one payment of \$6. It appears to be true that many members think they are Fellows when, as a matter of fact, they are not, because they have not made the required application. Only Fellows are eligible for participation in the work of the Scientific Assembly, for election as delegates, or for election as officers of the association.

**Organization**—The American Medical Association, with its nearly 90,000 members, is made up of more than fifty separate and largely independent organizations, each with its own peculiar problems and its own determining influences. In such a body it is oftentimes difficult, if not impossible, to determine where the weight of opinion lies with respect to any debatable question or procedure. It sometimes happens that when those upon whom administrative responsibility has been placed act to discharge what they conceive to be their duty in given premises, they receive as much of condemnation as of commendation. One large group insists that an attitude of most aggressive opposition should be assumed toward all or toward certain cults and their programs, legislative and otherwise. Another group, just as large and altogether as representative, takes exactly the opposite position. One State association may demand what another definitely objects to.

## (From the Report of the Board of Trustees)

**Subscription Department**—The Journal printed a weekly average of 80,862 copies during the year. \* \* \* In twenty-seven of the States more than 50 per cent of the physicians are receiving the Journal. Minnesota shows the highest percentage, 69; North Dakota the next highest, 67; California, Connecticut, and Illinois, 65.

**Advertising Department**—A reference to the Auditor's report will show that the Advertising Department of the Journal earned during the year a little over \$600,000—\$31,421 more than in 1921. This earning exceeded the amount received from subscription and Fellowship dues, which was \$463,586.

**Special Journals**—A satisfactory report can be made regarding the five special Journals now being published by the Association. The circulation of the Archives of Internal Medicine for 1922 was 2526; of the American Journal of Diseases of Children, 2841; of the Archives of Neurology and Psychiatry, 1203; of the Archives of Dermatology and Syphilology, 1316; and of the Archives of Surgery, 2931.

**American Medical Directory**—The eighth edition of the American Medical Directory has been completed and will be in the hands of the subscribers before this session is held. Eight thousand five hundred copies have been printed.

**Quarterly Cumulative Index**—The Quarterly Cumulative Index is another of the publications issued by the Association solely in the interest of scientific medicine. The circulation for 1922 reached 1129, which must be regarded as entirely satisfactory.

**Hygeia**—An active campaign of promotion of Hygeia was begun among physicians in December and continued until about the middle of March. This promotion was in the form of advertisements in the Journal and through circulars. This campaign resulted in securing approximately 15,850 orders. About the middle of March, at the time the periodical appeared, a similar, active campaign was inaugurated among the public, appeals being made through circulars and personal letters to presidents of universities, State and county superintendents of schools, educational boards, women's clubs, teachers, etc. On the first of May, there were 19,500 subscribers, the majority being those who had accepted the special offer.

**The Propaganda Department**—The interest on the part of the public in the Journal's educational work on the nostrum evil, quackery and pseudo-medicine increases yearly. Especially does the public show an intelligent appreciation of the task which the American medical profession has assumed of warning the layman against the pitfalls of the nostrum vender, the cultist and the quack. \* \* \* \* The first issue of Hygeia has brought to the Propaganda department additional inquires on the subject with which the department deals, and there is every reason to believe that as Hygeia becomes better known the department will be called on more heavily than ever before, for the attention of the public will be drawn to the fact that in the Propaganda department the public and the profession have a clearing house for information on the nostrum evil and quackery, and that the data it furnishes are both reliable and authoritative.

**Council on Pharmacy and Chemistry and the Chemical Laboratory**—During 1922, the Council and the Chemical Laboratory have continued their work in the interest of rational therapy. Each year finds an increasing number of physicians who are supporting this work, for the profession is realizing that the Council provides it with unbiased and dependable information concerning proprietary and new therapeutic agents. \* \* \* \* The pressing problems are the "mixed" vaccines, the pluriglandular preparations, products especially elaborated for intravenous therapy, and the attempts to commercialize our new knowledge of vitamins. The Coun-

cil continues to examine each "mixed" vaccine that is offered, but has accepted few of such mixtures. In spite of an extensive propaganda by certain firms which specialize in the manufacture of mixtures of endocrine substances, little, if any, scientific, controlled, clinical evidence has been presented to justify the almost ludicrous claims made by promoters.

## (Report of the Council on Medical Education and Hospitals)

**Progress of the Year in Medical Education**—Since our report a year ago, the number of medical schools in the United States has decreased from eighty-three to eighty-one through the closing by the State universities of Michigan and Ohio of their separate homeopathic medical schools. It is interesting to note that the number of medical schools at the present time is just half the number that existed in 1906, when there were 162 colleges—the largest number—which was more than half of the world's supply and many more than were really needed in this country.

**Medical Graduates**—The class of 2529 students who graduated in 1922 was small because it was the "war class," made up of the few students who matriculated in 1918. The larger numbers enrolled in the three following years indicate that there will be approximately 3000 graduates this year, about 3800 in 1924, and about 4500 in 1925. The last figure mentioned will bring the annual output of physicians to about what it was in 1907, when there were 4980 graduates from the 159 medical schools. In 1907 there were only thirty-one graduates on the average from each college, while in 1925, according to our estimate, the eighty-one colleges will graduate approximately fifty-seven students each. At present, also, more than 90 per cent of all graduates possess higher qualifications in both preliminary and professional education, as compared with less than 10 per cent of those who graduated in 1907.

**Present Numbers of Physicians and Hospitals**—There are now 145,966 physicians in the United States, or 590 more than in 1921. There has been a decrease in the numbers of physicians in thirty-two States, but this decrease has been more than offset by the increases in seventeen States. The small increase in the two years is due partly to the small class—2529—graduating in 1922, the war class, consisting of the few who matriculated in 1918. The proportion of physicians to population is now one to every 724 people.

**Survey of Group Clinics**—An outstanding fact about the whole subject of group medicine is the loose way in which the terms "clinics," "groups," "diagnostic group," "group practice," "medical group," and a number of similar terms are ordinarily used. Out of a total of 270 groups that have been listed up to the present time, not more than 100 would answer to even a liberal definition of group medicine, and still fewer have been found to be actually correlating the services of specialists as a routine in the examination and treatment of patients. Many situations that are learned of as "groups" turn out to be simple business arrangements for the common use of a building, including the sharing of the waiting room, telephone, clerical assistance, nurses, laboratory, roentgen ray and other facilities not available to the independent practitioner.

**Other Clinics and Dispensaries**—The total number of individual patients in all the 3944 general and special dispensaries within a year is approximately 8,000,000, and the number of visits made by them is approximately 29,500,000 per year.

The survey brought out the fact that whereas the services of dispensaries were formerly almost entirely free, the idea of allowing the indigent to contribute a small amount has grown until fully 60 per cent of all the dispensaries of the country receive partial compensation from at least some of their patients.

### THE PLIGHT OF THE FAMILY DOCTOR

(An interesting and profitable discussion by "A Physician" in the New York Times.)

This article is so timely and so well conceived and so well written that it is published in full in the Journal.

The prestige of the physician and surgeon is nowhere what it was at the beginning of the nineteenth century. The year 1900 was the surgeon's golden year from all standpoints. Medicine lacks the sensational cures, as for yellow fever, and the public, spoiled by wonderful medical success, has become more and more exacting. In the depths of its heart it bears a grudge against physicians because, notwithstanding the progress of science, people still die as our ancestors did in the Dark Ages. What the public wants is the physician's guarantee against death.

The New York State Department of Health reported in 1921 some 165 localities which had no doctor and that in 823 communities there was not a physician who had been out of college less than twenty-five years. Out of eighty-two applications for physicians from thriving villages and hamlets in New York, physicians were obtained for only half. The same situation exists in many other states. One town in New York raised a subsidy of \$2500 a year to keep its single physician. One of his nearest medical neighbors reported a drive of fifteen miles to cover a territory which a few years ago had several physicians. Many rural districts today lack medical service easily obtainable, of good quality and at a reasonable cost. The farmer needs a competent doctor within easy driving distance of his home and one who will give service for a fair compensation.

The effect of standardization of medical colleges and education, although it has produced better trained men, has reached the stage where it shows in a decreased number of graduates. Many medical colleges are limiting the number of their students so as to give better instruction. Most of the recent graduates in medicine are not willing to begin practice in the country but go to the cities. The tendency today is toward post-graduate study and then to go out as specialists, for this means a larger income with less work and without the irksomeness of a general practice. The specialist has regular office and hospital hours and is usually free from evening interference with his social life.

Between 1911 and 1919, in the rural districts of New York there was a falling off of 403 doctors, or 13.6 per cent, although the population had gained 7 per cent. City comforts and larger advantages attract the graduates of medical colleges to the cities, leaving the country deserted. The World War gathered many doctors into army and navy service and after their discharge the attractions of the city made them fail to return to the country.

Hospitals in the larger towns and cities do not take the place of a doctor for towns or rural communities. These places need resident physicians ready to care for minor emergencies, contagious and ordinary illnesses. The general practitioner, whether in the city or country, is the man who must continue to care for the majority of ordinary cases. The specialist and hospital cannot take his place. Inhabitants of rural districts do not want an elaborate system of bureaucratic state medical aid such as has been proposed. Both farmer and doctor will protest against any tendency which means paternalism.

A large proportion of the doctors in rural practice have been out of college not less than twenty-five years. This means that most of them obtained their education in the form of a high school course or less, with two or three years in a medical high school, an education much less expensive than that of today, and a start at least five years earlier in getting an income. To get a medical education today requires four years in an ordinary college,

four years more in a medical college, usually one or two years spent as interne in a hospital, and perhaps post-graduate study. After this comes the slow upbuilding of a practice.

Such an education has been estimated to cost \$2000 to \$2500 a year. Against this must be compared the income of men in other activities of life who begin earning immediately after leaving the high school or college. Figuring the above and counting interest, by the time a physician is really on his feet with an income in excess of his expenses, he has an investment of from \$30,000 to \$40,000. This means an interest charge of about \$2000 a year. Besides the requirements of the medical college for a degree in medicine, the addition of a year as interne in a hospital, a fifth year is coming to the front as an essential for the degree of doctor of medicine or as a license to practice. Ten medical colleges and ten state licensing boards require this today.

As hospitals and medical colleges have come more and more under the control of non-medical men and lay organizations, there apparently is a movement to lengthen the time required to obtain a degree of doctor of medicine and to increase the amount of ultra-scientific education required for a diploma. Another coming step in medical education is to limit the freedom and prestige of the legally licensed physician to practice the various branches of medicine and surgery under the plea that to properly train himself as a specialist a physician must have an additional and special training. Perhaps here lies concealed the cunning hand of the present groups of specialists to limit competition, helped by those who strive for the last iota of possible education.

In former days the specialist was developed from the general practitioner group by the natural process of experience along special lines, aided by periods of post-graduate work. No training is as desirable for the future specialist as a few years' work in general practice. This is the up-to-date medical graduate who goes direct into post-graduate study and a specialty does not receive, and it weakens his general grasp and outlook. It makes his viewpoint narrow. Special committees, largely under the influence of specialists, are now studying the needs of the various specialties in order to suggest minimum courses of post-graduate instruction which physicians will be expected or required to take before they can be classed as specialists. This probably will mean from one to three years of post-graduate study. The graduate school of the University of Pennsylvania now offers regular medical courses of one to three years' duration for "appropriate certificates" or "graduate medical degrees" in some seventeen specialties. Of course, this is after a man has studied for and taken his M. D. degree.

The following advertisement in an August, 1922, medical journal gives an idea of what industry is willing to pay for medical service:

"Wanted at once, resident physician for an industrial plant. First aid, physical examinations, etc.; \$250 per month, without maintenance. Eight hours service. Private practice permitted off time. N. Y. State."

Eight hours' service and private practice permitted are an impossibility and absurd. The \$3000 per year this advertisement offers is a fair example of the remuneration industrial surgeons receive. Public health and school physicians receive about the same, running from \$2000 to \$3500, rarely more.

The elimination of disease, the first duty of a doctor and of the greatest good to humanity, is cutting down the scope of the work of the general practitioner, whether in city or country life, and the agitator and the propagandist have found in the field of medicine plenty of room to ply their arts. They have gone so far as to make some of the public believe that socialism in the medical field would

bring higher standards. This creates a perilous situation, for, with the initiative and individuality of the physician removed, men of character, ability and energy would fail to enter the profession, and these are the type of men who keep medicine in the front rank of science. Free health service sounds well, but it is economically wrong. Although the public needs protection, it needs education even more.

Prevention of disease is a natural function of government, but free state health service should not be expected by those who can afford to pay. At no time have physicians neglected the needy poor; those deserving it can always receive the best of medical care without expense to themselves from the individual physician, the dispensary or the hospital.

In a certain city in this country a large number of health centers have been established under the auspices of the board of health. A large number of the physicians in that city are serving in those centers either in a part or full-time basis. Full-time doctors receive from \$1500 to \$300. The urological department is a fair example. In this department free treatment is advertised for man or woman, without distinction between those who can afford to pay and those who need charity. One of the physicians connected with this department, on a part-time basis with a salary of \$760 a year, saw from fifty to seventy patients in a two-hour period three times a week. This is a factory type of quantity production with no individuality of treatment. The taxpayers pay the bills, the patients receive only mediocre treatment, and the individual physician is driven to the wall.

State health insurance is a serious menace to the medical profession today. It means classifying those who earn less than a certain amount into groups and having the state (the taxpayers) pay the physicians small amounts to care for the groups. The social uplifters are using all possible means to bring this about, not looking forward to the ultimate result. Many physicians believe that compulsory health insurance will be ruinous to medicine and reduce the doctor to the cheapest paid and most degrading contract worker in all the professions.

In eight states bills have been introduced to compel physicians to furnish medical care at twenty-five cents to fifty cents a call for about one-fourth of the population employed in our industries. This idea is being pushed by charity workers, public health agencies and officials and others interested in philanthropic work of the social uplift type. It would result in one of the greatest bureaucracies, bring medicine under the politicians' control, and ultimately require a large amount of the taxpayers' money. It would tend to pauperize the laboring class. Labor is worthy of a wage large enough to allow employment of a doctor of its own choice. Physicians practicing among the laboring classes on an independent basis would be driven from the field. The patient probably would not be allowed to choose his own physician.

Companion bills, apparently from the same source, have been introduced into many state legislatures requiring physicians to be relicensed each year, perhaps re-examined, and where a physician was not willing to do the bidding of the social uplifters in state insurance practice his license or right to practice might be taken from him.

For nine years England has had national or state health insurance. It is still an experiment there; it is proving costly and by no means universally satisfactory. Public health conditions have not improved, and there is talk of repealing the act.

Bureaucracy is said to be the only form of government for which the philosopher can find no defense. The president of the Michigan State Medical Society predicts that in a short time department stores will install medical departments to furnish treatment for the sick at cut rates so as to attract customers and stimulate the sale of mer-

chandise. Department stores now maintain drug and prescription departments. Medical departments are only the next step in evolution. Already they have optical sections, with hired oculists.

In discussing nursing, the president of the Connecticut State Medical Society reports that the graduate nurse of today is on a different plane from those of a quarter of a century ago. He states that the three-year course of training required for a nurse, added to the demand that the pupil shall have a four-year high school preparation, results in an overtrained individual so far as nursing is concerned. He says that the very term, "graduate nurse," is fast becoming a misnomer, for these nurses either marry or become visiting, school, or district nurses, technicians or attendants in physicians' offices, positions which only by a very broad interpretation can be construed as nursing under the usual significance of that term.

The trained nurses of today have ambitions far beyond their original sphere of caring for the sick in homes or hospitals under the direction of a physician. They desire to develop into some form of expert, such as nurse anesthetist, technician, instructor of nursing, school nurse, factory nurse, office assistant, child welfare workers and other positions in the field of public health work under civic and social agencies. In practically all these lines they become more or less independent of and direct competitors with the general medical practitioners. The number of nurses so engaged was estimated in 1921 as more than 10,000, and increasing fast. The work of these nurses today includes much which a few years ago was entirely in the field of the doctor.

Society through legislative action has assumed its natural right of regulation as to who shall practice medicine by stating the qualifications therefor. Legally speaking, this is part of the regulations that modern society has evolved for its own protection to safeguard the public from incompetent and unscrupulous persons. Practically, however, the medical practice laws in the various states largely have been secured at a great expense of time and labor on the part of physicians. The public seems to have very little interest in these laws, believing that they are for the benefit of physicians. These laws do not deter the faker or the charlatan, and they do not prevent any new sect which may spring up from overriding their provisions. Enforcement of these laws has been left to physicians in great degree, usually acting through their medical societies. In actual practice this was proved most unsatisfactory. It is nobody's business to start action, and in most instances the law is rarely enforced against offenders.

It would seem as though the lack of rural doctors was only the beginning. The tendency today is for the medical graduate to go into a specialty, as this means an easier life and greater rewards. The grinding down of the general practitioner by the various means indicated is steadily increasing, and I venture to prophesy that it will not be long before there will be a shortage of general practitioners in the cities.

Is the practice of medicine worth while? This was the subject of discussion at a recent meeting of the Pennsylvania State Medical Society. The answer given by one physician was as follows: "If your ideals in life are money, ease, fame, the praise of your fellowmen, if you want to have a good time, if you want to be in society, if you want to marry a woman and make her happy instead of uncomfortable and miserable, keep out of medicine. You cannot have a home without some real woman, but as a physician's wife she must go through life without the silks, satins and furs of other women, must be deprived of social life and the many things that are attractive to her. The practice of medicine requires labor, self-sacrifice, self-denial and everything of that kind, together with much abuse."

### THE ABUSE OF CHARITY WORK

The following circular letter has been sent to all members of the Hennepin County Medical Society, which includes practically all the physicians in Minneapolis:

The Public Health and Hospital Committee of the Hennepin County Medical Society is anxious to receive specific complaints from members of the society of violations of the rules of the various clinics and charitable organizations of the city by people who can afford to pay for medical service.

We feel that when the members of the medical profession do the work in all of these agencies, and, in addition, 40 per cent (roughly estimated) of their private practice is without compensation, those who can afford to pay should do so.

We hear constantly complaints of excessive doctors' fees. Possibly the use of free clinics by a large number who could afford to pay at least a small fee may to some extent be responsible for this condition.

We are anxious to get some definite data on this question, and would appreciate concrete information in regard to specific instances of violations of this kind and also of attempts on the part of social workers to lead people away from their own physicians to free clinics.

Of course, it is understood that this information shall be entirely confidential.—Editorial in *The Journal-Lancet*, April 1, 1923.

**Congress and Health Legislation**—During the four sessions of Congress from April 11, 1921, to March 4, 1923, over 21,000 bills and resolutions were introduced in both branches; 16,700 in the House and 5419 in the Senate. Of these, about 350 bills and resolutions are of direct interest to physicians. In other words, only 1.6 per cent of the measures before Congress have dealt with public health. Nine hundred and thirty-one laws, of which 655 were public and 276 of private character, were placed on the statute books during the Sixty-seventh Congress. Only thirty-one of these, or 3.3 per cent, have a direct bearing on public health. The health bills which passed include, among others, the following public laws and public resolutions:

#### Health Laws Passed

No. 47. Veterans' Bureau created. August 9, 1921. (H. R. 6611.)

No. 51. Packers Act. Regulating interstate and foreign commerce in livestock and dairy products. (H. R. 6320.)

No. 74. Cincinnati Health Exposition, cancellation stamp for. October 10, 1921. (H. R. 8365.)

No. 78. Veterans in Hospitals, tobacco for. October 14, 1921. (S. 1718.)

No. 96. Anti-Beer Act, supplement to national prohibition law. November 23, 1921. (H. R. 7294.)

No. 97. Maternity and Infancy, promotion of welfare of (Sheppard-Towner law). November 23, 1921. (S. 1039.)

No. 110. Searcy hospital for colored insane in Alabama, land for. (H. R. 6961), November 5, 1921.

No. 125. Water supply for Fort Monroe. (H. R. 7204.)

No. 129. Medical and surgical supplies transferred by Army to Russian relief (S. 2708), January 19, 1922.

No. 194, No. 216, and No. 273. Hospitals for veterans. (H. R. 10,864, H. R. 11,547, H. R. 11,588, respectively), April 14, 1922; May, 1922; July 1, 1922.

No. 227. Narcotics prohibited from importation

or exportation except for medicinal purposes. (H. R. 2193), May 26, 1922.

No. 225. Pay of Army, Navy, Public Health Service, etc. (H. R. 10,972), June 7, 1922.

No. 318 Tariff Act. (H. R. 7456), September 21, 1922.

No. 330. Leprosy station in Hawaii. (H. R. 11,589), June 19, 1922.

No. 347. Coal Commission. (H. R. 12,377.)

No. 352. Fees, surgeons of Pension Bureau. (S. 3540), September 22, 1922.

No. 430. Federal Leprosarium, additional buildings for. February, 1923. (S. 3721.)

No. 460. War Risk Insurance, amendment concerning. March 2, 1923. (H. R. 10,003.)

No. 463. Hospital in Arkansas, transfer. March 2, 1923. (H. R. 12,751.)

No. 472. Sewage drain at Miami, Florida. March 2, 1923. (H. R. 13,272.)

No. 513. Filled milk, prohibition of in interstate commerce. March 3, 1923. (H. R. 8086.)

No. 516. Reclassification of Government positions and salaries. March 3, 1923. (H. R. 8928.)

No. 542. War Risk Insurance, amendment concerning. March 3, 1923. (H. R. 14,401.)

No. 519. Butter, standard for. March 3, 1923. (H. R. 12,052.)

No. 536. Compensation for injured government employees. March 3, 1923. (H. R. 14,222.)

#### Public Resolutions

No. 63. Disposal of articles produced by patients of Veterans' Bureau. (H. J. Res. 313.)

No. 65. Pollution of Navigable Waters convention. (H. J. Res. 297), August, 1922.

No. 75. Water supply of Kansas City, Missouri and Kansas. (S. J. Res. 216.)

No. 96. Narcotic control, international co-operation in. March 2, 1923. (H. J. Res. 453.)

In looking over these thirty-one laws, it will be noted that a dozen or so are of considerable importance to national health. These include the acts for creating the Veterans' Bureau and the hospitalization of veterans, the maternity and infancy law, the anti-beer measure, the laws relating to narcotics, increase of pay for the Public Health Service, reclassification of government salaries, the tariff, the act increasing facilities at the Federal leprosarium, and the filled milk law. There is, of course, some difference of opinion regarding a few of these laws, such as the Maternity Act and the filled milk law, but these dozen measures mentioned are the ones which will influence public health.

#### Health Bills Not Passed

Since only thirty-one health bills became laws, about 320 failed of passage. Many of these were minor measures and some of them "freak" ones, and a large number never got out of committee. Among the more important health bills which did not pass may be mentioned: The resolutions to amend the Constitution relative to restriction of child labor; transfer of the activities of the Inter-departmental Social Hygiene Board to the Department of Justice; the Fess-Capper bill for Federal aid to physical education; commissions for sanitary engineers in the U. S. Public Health Service; reorganization of the U. S. Public Health Service; the uniform marriage and divorce bill; sale of Marine Hospital at Detroit; a number of bills relating to tuberculosis; and a couple of anti-vivisection measures. The District of Columbia, for which Congress legislates, fared particularly badly with respect to health measures. Bills to regulate milk, venereal diseases, optometry, and child welfare were not acted upon.

### ADVERTISING—DIRECT AND INDIRECT

The obligation assumed on entering the profession requires the physician to comport himself as a gentleman and demands that he use every honorable means to uphold the dignity and honor of his vocation, exalt its standards and extend its sphere of usefulness.

Though not included within quotation marks, the foregoing is the opening sentence of Section 1, Chapter II, of the Principles of Medical Ethics, the chapter devoted to "The Duties of Physicians to Each Other and to the Profession at Large." Section 4 of the same chapter reads thus:

#### Advertising

"Solicitation of patients by physicians as individuals, or collectively in groups by whatever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. This does not prohibit ethical institutions from legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste, or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulaing such cards.

"It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or success in the treatment of diseases or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

That there is a growing tendency upon the part of some physicians, as individuals and as groups, to avail themselves of the possible beneficial results of a free use of printer's ink judiciously spread on letter heads, cards, circulars, the pages of newspapers and the columns of popular magazines, seems to be evidenced by the number of letters coming to the offices of the American Medical Association, from practically all parts of the country, with copies of the aforementioned letter heads, cards and circulars, or with clippings from newspapers and magazines attached. Some of the letter heads and cards are altogether unobjectionable, others are impossible. None of the circulars are permissible under the principles of medical ethics. The newspaper clippings are varied in character—some of them are absolutely without character. The same may be said of the clippings from magazines.

It is inevitable that a successful physician, whether in hamlet or populous center, will occasionally find his name and his deeds heralded in a newspaper. Of course, the greater his fame and prestige, the greater the chance that he will be "published." By far the greater number of newspaper items about physicians and their work appear without the connivance and without the knowledge of the physicians concerned. But when these items appear one week after another in the weekly newspaper, there is a basis for suspicion, to say the least. When they appear with the

picture of the subject of comment conspicuously displayed in the middle of the article, then there is basis for more than suspicion, though it sometimes happens that even the appearance of the beaming features of the gentleman written about does not mean that he has connived. Some of the ablest physicians have been unwilling and mortified victims of journalistic enterprise.

Of late months, newspaper articles, some of them occupying entire pages, have appeared telling all about this, that or the other clinic or group. Some of these are obviously not inspired, but are the evidence of a desire upon the part of the newspapers to glorify the advantages enjoyed by the communities these papers serve. Others of these articles present such complete details about men, methods and organizations or institutions that it is hard to escape the conclusion that somebody on the inside took time to particularize for the benefit of the writers. Some one has said that the formation of groups has a very peculiar influence upon the members thereof. A very easy way to determine whether or not a statement to appear in a newspaper about a group of men working together will come within the limit of proprieties established by the principles of medical ethics is to substitute the name of a single physician for the name of the group wherever it appears. Let us try it here: "The Winnitaro Clinic, composed of the most capable physicians and surgeons in Winnitaro, is prepared to render better service to the people of this territory than can be secured this side of Newdelphia." Make it read: "Dr. John Doe, the best physician and surgeon in Winnitaro, is prepared to render better service to the people of this territory than they can secure from any other physician and surgeon this side of Newdelphia." How does that sound?

It is neither charitable nor fair to suspect every physician or every group that are made the subject of comment in newspapers of connivance in the preparation and publication of such comment. The wilful advertiser does not "uphold the dignity and honor of the profession, nor exalt its standards, nor strive to extend its sphere of usefulness" in keeping with the obligation assumed by one who enters the medical profession. His activities should receive the attention of the board of censors of the county medical society to which he belongs.

—American Medical Association Bulletin, May, 1923.

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**The Private Practitioner and the Nurse from the Private Health Organization**—Several private practitioners have recently stated to officials of this department that the public health nurses employed in their districts by private health or nursing organizations in going into the homes of their patients are in the habit of changing instructions in feeding and in other ways prescribing for the various members of the family.

"What can we do about it?" say these physicians. "The organizations which employ them must show what these nurses have accomplished in order to get the financial support to continue the work. If we complain, it is believed that the basis of our complaint is that we are afraid we will lose fees through such gratuitous advice. As a fact we may be treating the family at a most nominal charge or without charge, and the real help we could and should give such family is nullified because the family follows the advice of the nursing service, which is free, and discounts its real need of medical care. In many instances these nurses foster the idea that a good nurse is worth more than a physician. They entirely overlook the fact that a good nurse and a physician working together in their proper relations get better results than either alone can get. Because of this state of affairs we are not in favor of public health nurses."—New York Health News.

### THE COURTS AND PUBLIC HEALTH

These abstracts from the news sheets of the National Health Council are considered of interest to our members:

"It may be said that law is of two kinds—the written, embodying the expressed will of the legislative branch, and the unwritten, consisting mainly of the decisions of courts of last resort, which interpret and apply the written law. Since there are forty-eight State supreme courts or courts of appeals, principles of law vary considerably throughout the United States, though they are probably more in harmony on public health matters than many others. Decisions of the highest court of a State are binding on that State, and in the absence of decision in a similar case in another State, may be a precedent for the latter State court. The United States Supreme Court deals with matters arising under the Federal Constitution, which may have been appealed from State or lower Federal courts. In a few cases it has original jurisdiction, as in controversies between States.

The Federal Maternity and Infancy Act is before the U. S. Supreme Court. The petition of the commonwealth of Massachusetts to bring suit against Federal officials who administer the Maternity and Infancy Act (Sheppard-Towner law) as outlined in Statement No. 34, page 1, was granted by the U. S. Supreme Court on October 23, 1922. The return has been set for January 2, 1923, before which time the complaint must be answered. Future developments in this case will be followed in these reports. Copies of the reprint entitled "The Constitutionality of the Federal Maternity and Infancy Act," setting forth impartially both sides of the argument, may be obtained from the Washington office of the council.

#### Vaccination Regulation Upheld (Washington)

State ex rel, Lehman vs. Partlow et al., 205 Pac. 420. March 28, 1922. Facts. In accordance with instruction from the State Director of Health, the school authorities of Thurston County ordered all unvaccinated children to be vaccinated. Lehman refused to permit his daughter to be vaccinated. The facts were undisputed, as the case was argued on a demurrer, which was overruled in the lower court and appealed to the Supreme Court.

Holdings—The Supreme Court upheld the vaccination requirement as within the authority conferred by the statute on the State Director of Health.

Comment—Courts have quite generally upheld vaccination. In January, 1922, the Superior Court of Cook County, Ill., held that damages could not be recovered against the health commissioner for excluding unvaccinated children from school. This case, while interesting, is not an authority, as not coming from the highest court in the State.

#### Venereal Diseases

Two recent cases have dealt with this subject, though with somewhat conflicting results. In *ex parte Caselli*, 204 Pac. 364, a Montana case decided January 24, 1922, a woman affected with gonorrhea was held by the sheriff under an order of the health officer of the city of Missoula. She applied for a writ of habeas corpus (see No. 6 below) on the ground that she was not granted a judicial hearing before being detained. The court upheld her detention on the ground that it was justified under the police power.

In *Rock vs. Corney et al.*, 185 N. W. 798, a Michigan case decided December 21, 1921, a girl was examined, found to have gonorrhea and was placed in a hospital, the inspector of the State Board of Health refusing to permit her to be quarantined at home. The court held that this was an unlawful use of authority and the question whether

the refusal to quarantine her at home was unreasonable or not should have been presented as an issue of fact for the jury. The judgment was reversed in favor of the girl.

#### Habeas Corpus and Quarantine

Habeas corpus is a writ which inquires into the restraint of any person. When granted, the person detained is brought into court at once and given an opportunity to show why he should be released. In a number of recent cases it has been brought out that this is the proper procedure for a quarantined person who believes his detention is illegal. This point was particularly developed and sustained in *ex parte Caselli* cited above, and other cases.

**Ascertaining the Splenic Index and the Mosquito Focus from Schoolchildren—Samuel T. Darling, Baltimore (Journal A. M. A., March 17, 1923), emphasizes that schoolchildren can be utilized by the epidemiologist and the health officer not only in estimating the amount of malaria in a community, but also, at times, in revealing the source of the anophelines responsible for their infection. In rural communities where malaria exists, the school should furnish an index of the amount of malaria present, because of the well known frequency of splenic enlargement in children in an endemic or epidemic region, and because the children are representative of the exposed group, temporarily segregated and readily accessible to the epidemiologist or to those interested in malaria control. In malarial infection there is a correspondence in time between the appearance of malarial plasmodia, the occurrence of fever, and the enlargement of the spleen. This takes place in new infections, in reinfections and in relapse. The splenic enlargement persists for some time after the subsidence of fever. In a few instances, malaria infection is not associated with splenic enlargement, as in some cases of acute and fatal pernicious malaria and in cases of superinfection. It is also true that, wherever malaria has caused splenic enlargement, the clinical history is usually sufficiently definite to permit the making of a diagnosis from the latter. Many epidemiologists, however, would welcome a method which would elicit information without the necessity of relying on the testimony of ignorant, overzealous or inco-operative persons. Darling reports the results of a survey of a Brazilian village. Sixty-six of 150 children had an enlarged spleen. In most instances the spleen was not greatly enlarged, being "palpable" or "one finger's breadth" in size. Blood specimens were not taken from every child, but only from representative age and sex groups. Half the children from whom blood specimens were taken had positive spleens. The plasmodium was nearly always that of tertian malaria. Of the fifty-seven children who lived in the lower half of the town toward the river, forty-two, or 73.7 per cent, had palpable spleens, while of the ninety-three children who lived in the upper part of the town and beyond, only twenty-four, or 25.8 per cent, had palpable spleens. This pointed unmistakably to the river margin as the principal if not the sole focus of the malaria in the locality, and it appeared to eliminate the stream which ran through the village, as well as any possible place farther away from the river, as being of any real importance in contributing to the malaria of the community. Many propagation areas were found in the low places between the river and the town, along the flood plain and in the borrow-pits and ditches near the tile works. Here larvae of *Anopheles argyritarsis*, *A. tarsimacula* and *A. albimanus*, well known carriers of malaria, were found in great abundance. Fewer were found across the river. The larval survey confirmed the indications obtained from spleen examinations, since the propagation areas were found to coincide with the areas near the homes of the malaria-infected children.**

### SOUTHERN CALIFORNIA MEDICAL SOCIETY

By Egerton Crispin, M. D., Secretary

The sixty-ninth semi-annual meeting of the Southern California Medical Society will be held in Los Angeles on the second and third of November, under the presidency of Robert Pollock of San Diego.

Among the speakers for the coming meeting are Frank Porter Miller of Los Angeles, who will present his conclusions of a series of studies on the "Carbondioxide Combining Power of Blood Plasma in Pulmonary Tuberculosis." John Bacon, for many years chief surgeon of the Miami Inspiration Copper interests, will discuss "Industrial Surgery in the Southwest," presenting some new phases in the executive management of this growing problem. A. H. Galvin of the Johnston-Wickett Clinic, Anaheim, will present "Some Causes and Methods of Treatment of Backache." Maurice Kahn will present his observations and the "Technique of Surgical Relief for Endarteritis Obliterans." Holland G. Hambleton, who has had a large experience at Ancon Hospital handling infections of the bowel, will discuss "The Recognition and Methods of Treatment of Pathologic Types of Amebiasis." Edwin Chamberlain of San Diego has a paper on "The Importance of Early Diagnosis in Tumors of the Urinary Bladder." Charles L. Lowman will use lantern slides to demonstrate "The Rationale and Technique of Surgical Treatment of Flat Feet." Guy Cochran will discuss "Hypertrophic Pyloric Stenosis in Infants," and surgical procedures for its relief. Elmer Belt, who for some years has been doing experimental work on Renal Circulation, will use lantern slides to show "The Results of Some Experimental Work on Renal Circulation and Its Surgical Value as Applied to Nephrotomy." Nelson Janney will use lantern slides to show an interesting series of "Orthopedic Deformities in Endocrine Diseases." Hans Lissner of San Francisco, chief of the Endocrine Clinic of the University of California Medical School and assistant clinical professor of medicine, will give a lantern slide clinic of curious people with whom he has to deal, showing "Types of Ductless Gland Diseases." Bernard Smith and Howard West will present a series of "Studies in the Use of Insulin." Carl Rand will use lantern slides to demonstrate "Studies on Spinal Tumors," in which there has been surgical intervention. Herbert Evans, Professor of Anatomy at the University of California, will present, illustrated by lantern slides and charts, experimental work demonstrating "The Hormone of the Anterior Hypophysis."

In addition to the above speakers, there will be many others of prominence in the medical profession and an interesting Saturday evening address on the broader problems of medicine and the profession by one of the able and well known educators of California.

**San Francisco Journal Rebuked**—The following letter, written by Thomas W. Huntington, chief surgeon of the Western Pacific Railroad Company, will, it is felt, express the sentiment of our members:

"San Francisco, Cal., Sept. 21, 1923.

"Andrew M. Lawrence, Esq., Editor The San Francisco Journal, San Francisco, California.

"Dear Mr. Lawrence—From a purely personal angle, permit me earnestly to protest the recent publication in your columns of an article from Pearson's Magazine. Without proof or warrant, said article unqualifiedly condemned the medical treatment of our late lamented President during his last illness, and viciously assailed the character and judgment of those to whom was assigned the grave responsibility of his care. This assault, lacking evidence or justification, was manifestly inspired by a desire to discredit and humiliate a body of men

whose repute in scientific medicine is above reproach.

"As a subscriber to The Journal from its inception, and voicing expressions from many high-minded men of my profession, this incident is a sad disappointment. After reasonable reflection we fail to understand the motive which prompted dissemination of matter which scientifically and ethically is without semblance of credibility. Medical men universally court helpful constructive criticism. Baseless misstatements we resent. Yours truly,

"T. W. Huntington.  
"978 Mills Building, San Francisco, Cal."

### NEW MEMBERS

Oakland—S. S. Yamada, John R. Gray, Colin R. McKenzie, Hector D. McKenzie.

San Francisco—Robert C. Martin, Dwight E. Shepardson, Frederick P. Shafer, Edward M. Talbott.

Lassen—Plumas County—Clyde E. Watson.

### TRANSFERRED

Fletcher B. Taylor, from San Francisco county to Alameda county.

Christopher Leggo, from San Francisco county to Alameda county.

Richard F. Mogan, from San Francisco county to Los Angeles county.

A. E. Belt, from San Francisco county to Los Angeles county.

W. A. Perkins, from San Francisco county to Alameda county.

David Divanovich, from Fresno county to San Francisco county.

A. H. Moore, from San Francisco county to Los Angeles county.

### DEATHS

Doyle, Olline Burton. Died at Fresno, August 28, 1923, age 48. Graduate of the Kentucky School of Medicine, Louisville, 1898. Licensed in California in 1898. He was a member of the Fresno County Medical Society, the California Medical Association and the American Medical Association.

Gould, Elisha Tolman. Died at Sonora, September 9, 1923, age 67. Graduate of the Bowdoin Medical School, Portland, Maine, 1880. Licensed in California in 1882. He was a member of the Tuolumne County Medical Society, the California Medical Association and the American Medical Association.

Mackerras, Robert Hamilton. Died at Pasadena, August 17, 1923, age 45. Graduate of Queens University, Kingston, Canada, 1903. Licensed in California in 1905. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

Magee, Allyn Claude. Died at Los Angeles, August 11, 1923, age 46. Graduate of the Physicians' and Surgeons' College of Los Angeles, taking a post-graduate course at Mayo Brothers. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.

Manger, Charles Christian. Died at Los Angeles, August 22, 1923, age 52. Graduate of the Medico-Chirurgical College of Philadelphia, 1906. Licensed in California in 1911. He was a member of the Los Angeles County Medical Society, the California Medical Association and the American Medical Association.